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### A CASE OF ACUTE PRIMARY MASTOIDITIS, BILATERAL, WITHOUT ASCERTAINABLE CAUSE, OCCURRING IN A PATIENT WITH SLIGHT SCLEROSIS OF THE MID- DLE EAR; CURED BY OPERATION.

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While the following case presents many features of unusual interest to the otologist, it will be of still greater interest to the general practitioner, for certain reasons that will be obvious. Similar cases are much more likely to come within his field of observation than that of the specialist; and the main object in offering this report is to contribute toward facilitating a diagnosis which may be fairly termed difficult and very important. The case here presented is by no means unique, but is an exceedingly well-marked example of a departure from the ordinary course of an ordinary disease, viz., chronic catarrhal otitis media of the sclerotic form. An intercurrent, or more properly a reactionary inflammation, the symptoms usually being mild, is frequent in middle ear sclerosis, and many attacks may recur in the same individual. The inflammation may involve the entire mucous membrane of the middle ear, or may be limited to a small circumscribed area, as the fenestra ovalis.

Reactionary inflammation occurring in sclerotic (interstitial) middle-ear affections begins either with or without a known exciting cause, as exposure to cold wind, sea bathing, la grippe, acute catarrhal rhinopharyngitis, etc. There occurs a sudden reversal of the conditions which constitute the basis of the sclerotic process (enfeebled circulation and impaired vitality), hence the term "reactionary" seems most appropriate. This reaction consists in a heightened vascularity and over-activity of normal processes in structures so reduced in physiological capacity that even a normal circulation could not be properly maintained. That such a reactionary inflammation may be chiefly, even entirely, confined to the mastoid process is demonstrated by the case here reported, which may be regarded as typical of its class.

On August 4th, 1896, Annie K., aged 22, applied at Dr. Lewis' clinic, in this hospital, in the service of Dr. Clemens, stating that one month previously she had some pain in the left ear which ceased in a few days, leaving her with moderate tinnitus, vertigo, and impaired hearing. Examination shows a pale, thin, depressed membrana tympani, and some retraction of the manubrium. The chorda tympani nerve with its investment of mucous membrane was plainly visible as a white parchment-like band. The neck of the malleus formed a prominence in Prussak's space. Shrapnell's membrane was pale and shrunken, the striæ prominent. There was no cicatricial tissue nor other evidence of former inflammation, and the patient was positive that she never had ear trouble before. Examination of nose and throat was negative, and the Eustachian tubes were normal. The diagnosis of chronic catarrhal otitis media was made. Treatment, politzerization, and gentle use of the Delstanche rarefacteur.

August 11th.—Complaints of pain in left temple, side of head, mastoid, and ear. The slightest movement with the rarefacteur aggravates the pain in all those localities. Appearance of *mt* and canal unchanged. Slight tenderness at apex of mastoid. Politzerized. Rarefacteur discontinued.

August 13th.—Pain more severe in same locations; also pronounced vertigo, nausea, and vomiting. Pain has prevented sleep, and appetite is lost. Bowels were kept free by use of mag. sulph. At the tip of the mastoid a slightly enlarged lymphatic gland is very tender. Some tenderness above ear; and on posterior part of mastoid. Temperature 100.4°, pulse 110. No change in *mt* or canal. The pain being distributed over an extensive area, and reflex in character, I consulted Dr. Terriberry, who concluded that it was all due to a mastoiditis. The patient was directed to rest in bed, apply three leeches to the mastoid, an ice-bag behind the ear, keep the bowels free, and take pilocarp. mur gr.  $\frac{1}{10}$  t.i.d.

August 15th.—Pain somewhat abated, but more paroxysmal in character; radiating to side of head, temple and occiput. Mastoid slightly swollen and tender. A chain of slightly enlarged glands, tender to pressure, extends downwards and backwards, their size diminishing from the mastoid apex. No enlarged glands elsewhere. Vomiting and sleeplessness continue. Temperature  $100.2^{\circ}$ , pulse 116. Canal normal, *mt* unchanged. The patient was now admitted to hospital, put to bed, four leeches to mastoid, Leiter's cold coil, pilocarp.  $\frac{1}{20}$ , and quin. sulph. gr. v. t.i.d. The quinine was suggested to eliminate the possibility of malarial hemicrania from the diagnosis.

August 16th.—Great pain in left side of head. Temp.  $100^{\circ}$ , pulse 99. Two leeches to mastoid. Antipyrine gr. v. every four hours.

August 17th.—Severe left hemicrania, remittent, with acute paroxysms. Slept less than an hour in last twenty-four hours, and strength is rapidly failing. Takes very little nourishment. Later in the day headache increased; the patient evidently suffering greatly. Mastoid now shows nothing abnormal except a very slight blush, and is a little tender on pressure at apex and post. border. The temple and side of head seemed more sensitive to pressure than the mastoid. After consultation with Drs. Van Fleet and Kinney, I decided to operate.

*Operation.*—The patient being anesthetized, the usual mastoid incision was made. The periosteum and bone were both normal in appearance. The osseous structure was cancellous and firm until near the antrum, where the bone was red and softened. The mucous membrane was here very red and swollen. The most notable incident of the operation was a sudden welling up of dark blood, almost as if the sigmoid sinus had been opened the moment the chisel entered the large cells near the antrum. The blood sprang up as if under great pressure. The antrum was then freely laid open, and all cancellous tissue, including the apex of the mastoid, was removed. The wound was packed and dressed and patient put to bed.

August 20th.—The temperature was  $100^{\circ}$  on the 18th, but fell to normal on the 19th, with pulse 80.

September 2d.—Since last date improvement has been uninterrupted. All vertigo, tinnitus, nausea, and vomiting have ceased, and there is but little pain.

September 12th.—Complains of pain in other (right) side of head and region of mastoid. Temp.  $99.6^{\circ}$ , pulse 95. Examination shows *mt* unchanged, this being an exact counterpart of the left, with the addition of a small calcareous deposit. Canal is normal. Ordered four leeches to right mastoid, Leiter's cold coil, calomel gr.  $\frac{1}{8}$  every

hour until bowels responded, and hot water douche in canal every three hours, the patient to rest in bed on light diet.

September 13th.—Pain about same. Temp. 99.4°, pulse 80. Ice coil and hot douches continued. K. I. gr. x. t.i.d.

September 15th.—Temp. normal, pulse 80, no pain, but some tenderness on right side of head and mastoid. Ice coil and hot douches discontinued.

September 19th.—Improvement continues. No pain, pulse and temp. normal. Operation wound of left side healing rapidly. Patient discharged, to report at clinic, and use K. I. gr. xviii. t.i.d.

September 24th.—Readmitted to hospital complaining of severe pain in right side of head, mastoid, and infra-auricular region, these parts being sensitive to pressure. Pain prevents sleep. Vertigo, nausea, anorexia, and stiffness of right side of neck. Temp. 100.2°, pulse 110. Four leeches to mastoid, cold coil, hot douches, every three hours. Continue K. I., adding liq. pot. ars. gtt. ij. t.i.d., and rest in bed.

September 25th.—Ice coil increased the pain and hot applications were substituted. The *mt* is now moderately congested, the post. sup. quadrant slightly bulging.

September 29th.—No improvement. Temp. varies from 98° to 100°. The *mt* is considerably swollen, and four hemorrhagic bullæ appear on its surface. Pain is constant, subject to severe exacerbations. Ordered sodii brom. p.r.n., and a cantharides blister to mastoid. All other treatment discontinued.

October 7th.—Pain on right side of head very persistent. Sleeps but little, sedatives giving no relief, and is constantly becoming more emaciated, weak, and pale. Vertigo, nausea and tinnitus are constant. The patient having manifested decidedly hysterical symptoms, Dr. Terribery was again consulted, who stated positively that the hysteria was merely incidental, and by no means the real trouble. Examination of urine by Dr. Grant gave a negative result.

October 12th.—Pain and other symptoms worse. Mastoid slightly reddened, a little swollen and tender. Vomited to-day. The hemorrhagic bullæ on the *mt* are nearly absorbed, and the membrane has resumed its former pale and sunken appearance. Notwithstanding the favorable appearance of the canal and *mt*, it is apparent that the disease is progressive, and that the patient's vitality is constantly failing. After consultation with Dr. Van Fleet, who fully concurred, I decided to operate on the right mastoid.

October 13th.—Operation under ether anaesthesia. There was a fibrous periostitis of lower third of mastoid with periostrum adherent.

Sigmoid sinus very close to canal, angular middle cerebral fossa, skull brachycephalic. All pneumatic structure in the mastoid process was thoroughly removed without any evidence of suppuration being found. The wound was then packed and dressed.

October 16th.—A few hours' earache to-day was followed by a purulent discharge from the aud. canal. On examination a perforation was found in the post. sup. wall of the canal leading into the antrum and operation cavity. The *mt* was not affected. This opening closed up in about ten days.

November 2d.—There has been no pain in head since the operation, and improvement is rapid. Discharge from the hospital to report at clinic.

November 24th.—Operation wound healed, and remarkable improvement in general health. Hearing for watch is  $\frac{3}{4}$  by right ear,  $\frac{3}{4}$  by left. Whisper heard 18 feet by right, 5 feet by left ear. Hearing power for ordinary conversational voice with both ears at once seems quite normal, and the patient says she hears perfectly well. All other symptoms have entirely disappeared.

*Remarks.*—A highly sensitive, firmly attached, unyielding mucoperiosteum, lining the mastoid cavities and septa, extensive in area, richly innervated, and with branches of communication to other sensory nerves, are important conditions favoring local and reflex pain during mastoiditis. In the above case a potent cause of acute reflex pain was the exudation pressure in the antrum and large cells of the left mastoid. Hemisideria, so prominent in this case, is the rule in inflammation of the mastoid antrum or atticus tympanicus. Fibrous periostitis and myringitis hemorrhagica, due to the reactionary inflammation of sclerosis, are very painful affections. Vertigo, nausea, and vomiting result from irritation, hyperæmia, inflammation, exudation, hemorrhage, etc., involving the semicircular canals or ampullæ. Tinnitus is due to the same causes acting on the labyrinth (the cochlear portion), or to anomalies of the sound-conducting apparatus—sclerosis in particular. Inanition and general prostration were induced by the constancy and severity of these symptoms, which interfered with nourishment, sleep and exercise. Anæmia and a cachectic hue developed, with emaciation, and the facies betokened great suffering.

Regarding the final outcome, if not relieved by operation, it is apparent that this type of acute mastoiditis is a disease of serious import. With the invasion of pus-forming cocci a reactionary inflammation of the mastoid cavities would at once assume a formidable aspect, threatening life itself. No doubt such an invasion does occur in many instances, a purulent mastoiditis supervening. These considera-

tions teach us that operative interference should be as complete as possible. Nothing short of a radical chiselling away of the pneumatic structure of the mastoid will suffice to give complete relief, or afford probable immunity from severe future attacks. In the case here reported, even with no pus formation, the disease advanced to such a point as to give rise to anxiety because of its progressive and obstinate nature, and the marked change for the worse in the patient's physical condition. Perhaps I may be pardoned for suggesting that the symptom-complex presented, with the negative appearance of the auditory canal and *mt*, as well as of the mastoid, was well calculated to raise suspicions of some severe form of intracranial lesion, although certainly none existed. It is certain that many cases of cerebral abscess progress to a fatal issue with symptoms far less pronounced, though often similar to those which obtained in this case. Perhaps this type of disease will be well observed and classified in future, for otology is surely undergoing remarkable development and progress. Politzer,\* speaking of sclerotic middle ear disease, says: "As Von Tröltsch correctly remarks, there is no doubt that, through extension of our anatomical knowledge, this interstitial form of inflammation may attain to a separate position in the series of diseases of the ear."

I am under many obligations to Dr. James B. Clemens for valuable suggestions and assistance during the patient's illness and at the last operation.

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#### **Empyema of the Maxillary Sinus in Children.**

Dr. E. J. Moure states that maxillary sinusitis in very young children is rare (*Rev. Hebd. de Laryng.*, Oct. 24th, 1896). The few cases reported are those of classic empyema, with deformity of the face and the orbit. Besides acute sinusitis, there exists, especially in more advanced childhood, the more insidious forms which are associated with the evolution of second dentition, and in which the surgical treatment is more delicate than in the adult.

Under the age of seven years, the author limits himself to using nasal douches and sprays of nitrate of silver. In the more advanced forms, with polypoid degeneration of the mucous membrane, he is often compelled to open the sinus through the inferior meatus and practice irrigation. In some cases it is necessary to extract a molar in order to make an alveolar opening.

Dr. Moure reports a case of a girl of 11 years, in which an empyema of the maxillary sinus existed, which had to be treated by means of an alveolar opening.

W. S.

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\* *Diseases of the Ear*, 1894, p. 275.

## THE RELATION OF THE TEETH TO THE EAR, NOSE AND ANTRUM.\*

BY DR. O. F. GAMBATI, HOUSTON, TEX.

The oral specialist is closely associated with the ear and throat specialist. In many cases which demand the attention of the laryngologist and otologist, the teeth form the *causus morbi*, which must be relieved by the dental surgeon before good results are obtained. It is as yet a disputed fact as to whether nasal or dental disease is the greater etiological factor in empyema of the antrum of Highmore. But it is undoubtedly a fact that a great many cases are of dental origin. This statement will be substantiated by the experience of every rhinologist present, who must have frequently had occasion to observe the direct connection between them.

It has recently been suggested that not only is antrum disease frequently due to dental origin, but also the reverse—that an empyemic condition of the antrum sets up a pathological condition in the teeth; and when it is remembered that the roots of the teeth sometimes project into the maxillary sinus, and are separated only by the mucous membrane, this complication is not hard to understand.

An intelligent understanding of the relation of the teeth to the ear, nose and antrum requires an appreciation of the anatomical and physiological relation of the mouth to these parts. Anatomically and physiologically considered, no other portion of the human organism offers such a complex association of tissues as those which compose the mouth; no other organ has such diversified physiological functions, and such significant and systemic relation. The wide circle of its anatomical and physiological relations suggests an equal circle of pathological complications, and indicates the diversity as well as the gravity of the disturbances which depend upon the pathological conditions of the oral cavity.

The terminal distribution, in and about the mouth, of the sensory and motor branches of the sensitive trigeminus, and its association with the great sympathetic, connects the teeth with the entire organism, and explains many of the reflex disturbances which develop from this region.

\*Read before the meeting of the Southern Section of the American Laryngological, Rhinological and Otological Society at New Orleans, March 3d, 1897.

So important to the whole organism is the proper development of the teeth that the dentist not only watches over the eruption and development of the deciduous teeth in infancy, but even goes back to its intra-uterine existence. The prospective mother is instructed as to her diet; which should be of those cereals containing the phosphate of lime, so as to supply the organism with proper material for building up this important structure.

The manifestations of reflex excitability due to dental irritation are numerous and varied. Earache is often associated with teething, and many inflammatory conditions of the ear are traceable to this region. The experienced otologist, therefore, never neglects a careful examination of the teeth before forming his final diagnosis.

The facility with which an irritation originating in the mouth may be continued to the ear and thence to the brain can readily be understood, when we remember the intimate relation between the parts concerned.

Cancrum oris originating from the teeth is sometimes fatal by reason of its extension to the pharynx. An alveola abscess in the lower jaw may, by extension, form a sinus in the throat. The following case will illustrate the latter complication:

A patient, at thirty-five years, suffered from a catarrhal affection of the throat, which had been treated for six months without success. He suffered from no pain which he could refer to dental origin, and thought that his disease was limited to the throat.

This patient called at my office to have his teeth examined, and I found a lower second molar on the left side, of a dark-bluish color. On tapping this tooth with an instrument, he said that he could feel the sensation extending down to his neck. I opened the nerve chamber, and the mephitic gas that escaped was very offensive. I immediately extracted the tooth, and found an alveola abscess nearly three-fourths of an inch long. Since the extraction of this tooth the patient has complained of no irritation or discharge in his throat, and this was still the case when I last saw the patient, two years later.

An abscess of the superior third molar may discharge into the nasopharyngeal cavity and simulate a post-nasal condition. To illustrate this I will give you the short history of such a case occurring in my practice. A woman, twenty-seven years of age, had been annoyed for a number of years by pus dripping behind the uvula, which the patient thought was due to nasal catarrh. She was treated for this, however, without obtaining relief. Some time later the patient consulted me in regard to having some dental work done, and incidentally mentioned this condition. On examining the oral cavity, I found the

third molar missing. I enquired whether she had ever had this tooth extracted; to which the patient gave a negative reply. I then asked permission to lance the gum over the unerupted tooth, and was rewarded by finding the tooth impacted. Chloroform was then administered, and the tooth extracted. A large abscess was found on the apex of the tooth, and from that time her nasal trouble ceased. This apparently was a case in which the abscess discharged into the nostril without involving the maxillary sinus. Had this been affected it would be difficult to understand how the nasal discharge ceased without proper treatment of the antrum.

The following case is an illustration of otalgia of dental origin: A patient, at twenty-six years, had suffered from earache for three months, relief being obtained only by morphine. As the treatment directed to this organ afforded no relief, the physician finally referred the case to me for examination of the teeth. I found the lower third molar on the left side lying horizontally in the jaw, with its masticating surface against the posterior surface of the second molar. This tooth was extracted, which was followed by immediate and permanent relief of the earache.

Not only may there be otalgia, but acute inflammation of the middle ear, of a catarrhal or purulent character, may result from dental irritation. Deafness, facial spasms, trismus, laryngeal cough, etc., may all be due to pathological conditions of the teeth.

Diseased conditions of the nose and throat may, on the other hand, have their influence on the development of the teeth. You are all familiar with the high-arched palate and irregular teeth due to chronic obstruction of the nasal or naso-pharyngeal cavity.

These cases which I have had the privilege of bringing to your attention will illustrate the fact, that the specialist should not be too narrow in his views, and should not limit his attention to one particular class of diseases without remembering the influence of the proximate and even distant organs on the pathological condition which he is treating. The specialist should be so only in limiting his treatment to a certain class of diseases; his knowledge should extend to every branch of human anatomy, physiology and pathology. In this way only will he achieve results which will be a credit to his specialty and to his profession.

## I. TWO CASES OF FOREIGN BODY IN THE TRACHEA; TRACHEOTOMY; RECOVERY.

## II. CICATRICAL ATRESIA OF BOTH CHOANÆ.

BY AUGUSTUS McSHANE, M.D.

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It would be difficult to conceive of a more appalling accident than the sudden entrance of a large foreign body into the larynx or trachea of a perfectly healthy subject. The immediate change from a state of cheerfulness and comfort to one of extreme anxiety and distress fills the spectators with dismay, while it tortures the patient with one of the awfulest sufferings that can be experienced—dyspnoea. As long as the human race has existed, doubtlessly there have been unrecorded and numerous cases in which liquids or solid bodies lodged in the larynx, or passed down into the trachea; but the modern literature of the subject is considerable, as we may see from the references by John O. Roe, M.D., in his excellent article in "Burnett's System of Diseases of the Ear, Nose and Throat." Large as the literature may be, it will bear a little augmentation in the way of clinical facts, though no features of extraordinary or unusual interest were developed in connection with the two cases that came under my observation in the clinic of Dr. A. W. de Roalds at the Eye, Ear, Nose and Throat Hospital.

The first case was a little boy, 23 months old, from Poplarville, Miss. On October 10th, 1896, at 8:00 A.M., the child was throwing corn to the chickens, and he amused himself by placing three grains of corn in his mouth. His sister, older than himself, said that he suddenly began to cough violently. The paroxysms were so severe that he could not stand. A grain of corn had evidently gone down his wind-pipe. The coughing and choking became worse, and the family physician, Dr. J. M. Smith, was called in, but his efforts brought no relief. The child's sufferings continued for about two hours, and then suddenly ceased, and he went back to his play. He remained cheerful from 10:00 A.M. to about 5:00 P.M., when, as he was nursing, he began to choke and breathe with great difficulty. After exhausting all available means, Dr. Smith advised the parents to bring the child to the city, which advice the parents followed. They arrived at the hospital on October 12th, 1896, at about noon.

I saw the child, with Dr. C. J. Landfried, at about 5:00 P.M., and found his breathing so much embarrassed that he could not have lived more than two or three days longer if let alone. There was loud rattling all over the chest; bronchitis had set up, but as yet no consolidation of lung could be made out. When the stethoscope was applied over the trachea, a very loud sound could at times be heard when the child coughed, which we attributed to the impact of the foreign body against the closed larynx. A deep inspiration would draw the offending body deeply down in the trachea. His temperature was 103° in the axilla. He was very restless. A laryngoscopic examination threw no light on the subject, for only an imperfect view of the larynx could be obtained, and no glimpse below the level of the vocal cords was possible, as the child struggled and coughed, and the examination worried him.

As the history of the case pointed to a foreign body in the trachea, and as the little patient was growing almost hourly worse, we decided to perform tracheotomy, which was done at 7:30 P.M. the same day. The instruments and hands of the operator and his assistants were rendered aseptic, as well as the field of operation. All of our precautions, however, were nullified by the expulsion from the trachea of a quantity of muco-pus, which was certainly not free from bacteria, and to which I attribute the considerable amount of local reaction that was observed in the second case. Chloroform was the anæsthetic used. The usual incision in the median line was made and the structure divided, layer after layer. The isthmus of the thyroid body was dissected up, ligatured on either side, and divided in the median line. At no stage of the operation was the hæmorrhage abundant. With the thyroid out of the way, Dr. Landfried steadied the trachea with a tenaculum, and I made an incision involving about the upper three rings of the trachea. A Delaborde dilator was inserted into the wound and sutures passed through the edges to keep it open. The anæsthetic was suspended to allow the sensibility of the trachea to return, in a measure. No foreign body lay immediately in view; a probe was passed down into the trachea for a short distance, and the tickling set up a violent spell of coughing, during which the grain of corn was expelled.

The wound was then cleansed, and the edges of the tracheal incision were brought together with cat-gut sutures; the rest of the wound was closed with four cat-gut sutures. A wick of iodoform gauze was left in the wound to facilitate drainage and prevent cellular emphysema, which may ensue when the cutaneous incision is very tightly closed. No tracheal tube was used, because the relief to the breathing after the removal of the grain of corn was immediate and complete. Gave 30 drops of paregoric every 3 or 4 hours to quiet him.

On the morning after the operation the patient's temperature was 100°. He nourished well, rested well, and coughed very little. The wound was redressed on the third day, and adhesive strips applied to keep the edges together, as the sutures were softening and giving away. On the fifth day his parents brought him back home. The subsequent history was uneventful; and Dr. Smith, who afterwards dressed the wound, wrote that on October 26th he discharged the case as cured. The bronchitis soon got well.

It may be interesting to note another case in the same family. A cousin of our little patient, about the same age and living in the same village, drew a grain of corn into the trachea about six months before our patient acquired his grain of corn. The same physician, Dr. J. M. Smith, advised the child to be brought to the city, where it was seen by Dr. De Roaldes. He advised tracheotomy without delay; but the parents demurred, returned home, and the child died in less than a week. With this case still fresh in their minds, it was not difficult to obtain the consent of the parents of our little patient to perform tracheotomy.

Our second case was a little girl, age 3, who inhaled a cotyledon of a peanut (ground-pea, goober, *pistache*), on Nov. 18, 1896, at dusk. Her younger brother had the peanut in his hand; she grabbed it and laughed, and tried to chew the peanut while laughing. The ingoing current of air drew the peanut into the trachea. She immediately had violent spells of coughing and dyspnoea, which lasted until brought to the hospital on the following morning. The breathing was much more embarrassed than in the other case, and there was a decided stridor on inspiration. The same hammering could be heard when the stethoscope was placed over the trachea. Temperature, 100 $\frac{2}{5}$ °.

A laryngoscopic examination revealed considerable swelling of the mucous membrane, just below the vocal cords, which, I thought, explained the stridulous inspiration. After consulting with Dr. Landfried, tracheotomy was performed, as soon as the instruments could be made ready, with the assistance of the resident staff. The operation was in the main a repetition of the previous one; the thyroid body was ligated and divided in the median line, and the upper three rings of the trachea were cut through. The edges were held open by silk threads, the chloroform was suspended, and the trachea tickled with a blunt probe. The first efforts at coughing brought the foreign body into view, but it was quickly drawn out of sight again. The tracheal wound, which seemed to be too small for the object, was enlarged; and another coughing spell forced it into the opening, and it was lifted out.

When the tracheal wound was momentarily closed, the child's breathing was still very labored. It was necessary to insert a tracheal tube, which was removed on the fourth day. The tracheal wound could not then be sutured, and it was allowed to close undisturbed. No inconvenience resulted.

The child must have been strumous, for the suppuration in the wound was at all times more than we would have expected in view of the precautions taken and careful nursing the child received. The temperature became normal two days after the operation. Some days later, one of the sutures (silk) tied around the thyroid isthmus came away; that would help to account for some of the pus. The pus set up a very intense and obstinate dermatitis on the front of the neck, for which she was afterwards referred to Dr. Isadore Dyer, under whose care the cutaneous complication quickly healed.

The patient was under observation for about two months. She soon recovered from the tracheotomy proper, but the suppuration in the superficial parts of the wound rendered attention necessary for some time. Her breathing lost its stridulous character when it was quiet; but when she cried there was always a suggestion of stridor. After her neck got well, I examined her larynx carefully; there was no stenosis there or in the trachea as far down as the obliquity of the tube would permit a view.

## II.

Bony occlusion of one choanæ is not so very rare. I have recently operated on such a case. But I have not yet seen mention of a case in which cicatricial tissue caused atresia bordering on occlusion in both choanæ. Zuckerkandl, in his "*Normale und Pathologische Anatomie der Nasenhöhle und ihrer pneumatischen Anhänge*," 1892, in his cases of intra-nasal synechiæ, speaks of a case of almost complete obliteration of the olfactory region, but does not describe any that compares with our present case in extent and completeness of obstruction.

The patient is an Italian woman, age 30, in good general health. Up to her twentieth year her nose was as free as anybody's. She had some sort of "catarrh," which made her nose stuffy, and ended in the extreme atresia, from which she now suffers. The cause of the "catarrh" has not been clearly made out. The slowness of the attack excludes diphtheria, and I can only attribute it to syphilis, though the history is unsatisfactory. On inspection anteriorly, I saw a small septal spur on each side, which prevented a good view of the deep part of the nasal cavities; and even when the turbinated bodies were shrunk up with cocaine nothing definite could be made out, except that it was impossible to see through into the pharynx. A probe could not at first be passed through the nose into the throat; after a

little manipulation and cocaine, the probe was passed through the left side, but not the right. When first seen, she could force a little air through the left nostril, but not through the right; after probing, a little air was squeezed through the right nostril.

The palate-retractor was applied, and an examination of the post-nasal space made. The choanæ were filled up with a pinkish tissue, funnel-shaped or depressed in the centre, and completely shutting the turbinated bodies out of view. A probe passed through the stricture could be plainly seen in the post-nasal space. Her hearing was not impaired.

The patient begged to be relieved, for the constant mouth-breathing was a source of great discomfort.

In order to get at the stricture, the septal spurs had to be removed. One was accordingly sawed off. The question of operation on the stricture itself next presented itself. A confrère had previously incised it, but the profuse hæmorrhage caused him to desist. I decided to use the electrolytic needle in the centre of the cicatricial mass, produce a slough, and then keep the opening patulous by means of plugs of cotton gauze, celluloid, or any suitable material.

The narrowing of the anterior part of the nasal cavity permitted the insertion of only one needle, to which the positive wire was attached; a dispersing electrode was held in one hand. The stricture was well cocaineized, but patient could not stand more than five milliamperes, and that only for about ten minutes.

In a few days, the slough came away, and the patient could blow through that nostril better than before.

She is still under treatment, and it will be a long time before anything like permanent relief can be looked for. A supplementary report of the case will follow.

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#### **Pseudo-Pertussis from the Presence of a Foreign Body in the Larynx of a Child of Five Years; Expulsion of Foreign Body; Cure.**

Dr. E. De Pradel reports the case of a child who had swallowed a pebble the size of a bean, and developed, two months afterward, a cough which resembled whooping-cough, so that this diagnosis was made (*Archiv. Int. de Lar., Rhin. et Otol.*, No. 7, 1896). Four months afterward, during a severe paroxysm, the stone was coughed up, and the child was well. The author believes that the foreign body, during this period of time, had been located in one of the ventricles of the larynx, although it could not be found on laryngoscopic examination.

W. S.

## DISEASE OF THE INTERNAL EAR. ANALYSIS OF 351 CASES AS REGARDS PROGNOSIS AND TREATMENT.

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In the last twenty-five years the science of otology has made noteworthy progress. With the advent of men like Politzer, Gruber, Schwartze, Moos, and many others, with their contribution to the pathology, diagnosis, and treatment of ear diseases, the science has had a new birth. To-day we are in a position to successfully treat most conditions of the external and middle ear. Our knowledge of involvements of the mastoid and of intercranial complications is to-day quite accurate, and the surgical procedures to relieve such conditions in general well recognized. The advance in knowledge, however, of conditions affecting the internal ear has not been at all commensurate. The reason for this is easily seen; the internal ear is not open to inspection as is the middle ear. Any trustworthy data must be derived then from post-mortem examinations. Such examinations up to the present have been few. As regards the treatment of these conditions, it is clearly recognizable that with any considerable amount of destruction of the delicate structures of the cochlea, no possible remedy exists. We believe, however, that in a certain proportion of these cases such destruction does not occur, at least at the outset, and that proper treatment, at all events theoretically, would be beneficial.

With a view to ascertaining, if possible, what success has attended our treatment of these difficult conditions in the past few years, the writer has been permitted, through the kindness of Dr. J. E. H. Nichols and Dr. James B. Clemens, to examine and tabulate the records of diseases of the internal ear treated in their clinics during the years of 1894 to 1897. Before proceeding, however, to give the result of these investigations, it may be well to allude in a few words to the more common causes of diseases of the internal ear. These include:

I. Disturbances of circulation in the labyrinth, as anæmia, hyperæmia, and hemorrhage, infectious diseases—syphilis, mumps, leukæmia, influenza, measles, scarlet fever—rheumatism, trauma, professional occupations, inebriety, senile changes.

II. Catarrhal, purulent, or sclerotic changes, involving the middle ear primarily. The condition known as Ménière's disease, and the more common infectious diseases, as scarlet fever and diphtheria, involving both middle and internal ear simultaneously. Certain drugs, noticeably quinine and salicylic acid, should be mentioned. Finally, diseases of the acoustic nerve, as the result of meningitis, tabes, intercranial neoplasm, rarely occur.

Very briefly now in reference to diagnosis. The three salient subjective symptoms of disease of the labyrinth are deafness, usually excessive, tinnitus, which may cease after a time, and vertigo. Objectively the diagnosis is based in primary disease of the labyrinth on the absence of all pathological conditions in the middle ear, and as the result of the examination by means of a tuning-fork. Aerial conduction is always preserved and in excess, while bone conduction is reduced or lost. (Rinne's law). This latter is of doubtful value, as unfortunately in a large percentage of cases of disease of the middle ear—46 to 77 per cent.—the same condition exists. Still greater weight is to be attached to the deductions or loss of hearing for the high notes in the tuning-fork series, especially for  $c^{iv}$ , low C in pure internal-ear disease being relatively little affected. Thus, in a series of 188 cases recently studied by the writer (*Archives of Otology*, January, 1897), representing all degrees of involvements of the internal ear, low C averaged for A. C.  $17\frac{1}{2}$  seconds, and B. C.  $9\frac{2}{3}$  seconds; for  $c^{iv}$ , A. C.  $5\frac{2}{3}$  seconds, B. C. 2 seconds, or expressed in percentage, 43 per cent.; A. C., 60 per cent.; B. C. for the low fork, as against 28 per cent. and 16 per cent for the high fork. Weber, Gelle, and Bing, have also formulated observations which are helpful in certain cases. With all our improved methods of diagnosis, however, we are undoubtedly still liable to error in certain cases. This, without doubt, is true in the statistics herewith presented. Authorities differ as to the frequency of involvements of the internal ear. Dowling (*St. Louis Medical News*, 1888) estimates 4 cases in 1,000. In 2,200 cases treated in the clinic of Dr. J. E. H. Nichols, there were 217 classified as diseases of the internal ear, *pure* or *mixed*. In the service of Dr. J. B. Clemens, out of 1,700 cases, 127 were reported similarly affected. From the two services where a similar class of patients presented itself, and like methods of diagnosis were employed, there were, therefore, out of a total 3,900, 351 cases of disease of internal ear, *pure* or *mixed*, or 11 per cent. Of the 117 cases, service of Dr. Nichols, reported as primary disease of the internal ear, 13 alone were one-sided; among them 12 were cases of presbycusis and 97 were mixed. In the combined services of the 351 cases, 176 were mixed. Omitting the

12 cases of presbycusis above-mentioned, 163 cases of pure internal ear disease remain for investigation. Etiologically these 163 cases were divided as follows:

Tumor of the brain.....	1
Hemorrhage .....	7
Syphilis.....	17
Diphtheria .....	1
Typhoid.....	3
Quinine poisoning .....	1
Congenital .....	1
Inebriety.....	3
Malaria .....	1
Rheumatism .....	3
Sclerosis, involving both middle and internal ear.....	11
Middle ear disease, with sudden extension into labyrinth..	1
Middle ear, not sclerosis .....	9
Scarlet fever.....	9
Meningitis .....	8
Syphilis (mixed).....	1
Sclerosis (pure).....	20
Measles.....	3
Ironworker .....	2
Anæmia .....	5
Hyperæmia.....	1
Boilermaker .....	2
Influenza.....	3
Telephone .....	1
Ménière's disease.....	6
Presbycusis.....	1
Traumatism .....	7
Functional .....	3
Purulent otitis media .....	2
Cause not discovered.....	31
Unclassified .....	11

It will be seen that among these diverse causes infectious diseases take the most important place, and of infectious diseases syphilis is most common. More potent, however, than all the other causes combined, if we consider the 166 cases reported as mixed disease, is the condition popularly known as dry catarrh, which in the above classification is accountable for 20 cases, and 11 others designated as mixed in the above table doubtless belong to the same condition. To this

group, moreover, most of the 31 cases of which the cause could not be discovered must be assigned.

*Result of Treatment.*—Of these 163 cases of pure internal ear disease (so diagnosed), 19 were cured or relieved. The remainder either underwent no treatment or showed no improvement. These 19 cases were divided as regards cause as follows:

Tumor of the Brain 1.—Vertigo relieved by iodide of potash and strychnine.

Syphilis 6.—Relieved by iodide of potash.

Sclerosis 1. Relieved by electric masseur.

Ménière's Disease 2.—(a) Relieved by iodide of potash and Delstanche-masseur. (b) Electric masseur.

Anæmia 1.—Relieved by tonics.

Hemorrhage 1.—Relieved by iodide of potash.

Mixed 1.—Relieved by iodide of potash.

Functional 2.—(a) Relieved by tonics. (b) Treatment to middle ear.

Unclassified 4.—(a and d) Relieved by treatment to middle-ear. (b and c) Relieved by iodide of potash.

To resume: in 12 out of 19, iodide of potash relieved.

Two—Electric masseur.

Two—Internal treatment (tonics).

To render, if possible, the study of these cases more complete, an examination was made of current medical literature through the files of the *Index Medicus* and of the *Archives of Otology*. This adds to the number of cured or relieved cases the following:

I. BARON, *British Medical Journal*, 1894, reports one case relieved out of four treated by pilocarpin. After thirty-five injections vertigo ceased and hearing improved.

II. GARNALT, *Journal of Laryngology*, 1894, one case of sclerosis where tinnitus was relieved by removal of stapes.

III. BAUMGARTEN, *Zeitschrift für Ohrenheilkunde*, 1891. Case of internal ear disease in the mother contracted from child suffering from scarlet-fever; relieved by injections per tubam of potassium iodide, 0.2–10.0, and cocaine, 0.5–10.0, equal parts.

IV. SMITH, *Medical and Surgical Reporter*, 1891, reports 47 cases treated with pilocarpin. He obtained good effects in certain instances, especially in cases of specific origin. He advises its use only in tinnitus of recent date.

V. DOWLING, *St. Louis Medical News*, 1888, a case of Ménière's disease relieved by strychnine pushed to point of tolerance.

VI. FIELD, *British Medical Journal*, 1889, three cases of excessive deafness cured by pilocarpin injections.

VII. McCALL, *Cincinnati Lancet Clinic*, 1890, Ménière's disease relieved by chloral and bromide of potash.

VIII. Moos, *Archives of Otology*, 1894, scarlet-fever relieved by pilocarpin.

IX. POLITZER, *Wien. med. Blätter*, 1885, 17 out of 65 cases treated by pilocarpin injections relieved. Recommends this treatment especially in syphilitic cases and in cases of recent origin.

X. KOSEGARTEN, *Archives of Otology*, 1888. Used pilocarpin in 30 cases with benefit; number benefitted not given.

Here is a total of 26 cases cured or relieved, not including the cases of Smith and Kosegarten, where the number is not accurately stated.

In 22 out of 26, pilocarpin was employed; in 1, strychnine; in 1, chloral and potassium bromide; in 1, tubal injections of iodide of potash and cocaine; and in 1, stapedectomy.

#### CONCLUSION.

From the analysis of these various cases, what deductions are we at liberty to make?

I. *About Cause.*—The most common cause of affections of the internal ear is undoubtedly that condition known as sclerosis or dry catarrh.

Through the investigation of Politzer and others this is now known to be chiefly an ankylosis of the stapes in the oval window, and in bony alterations in the structure of the middle and internal ear immediately adjacent. This condition, as Bezold has shown, is much more common than formerly supposed.

It is equally true, however, that a considerable proportion of involvements of the internal ear spring from a simple hypertrophic catarrh of the middle ear.

As regards acute conditions, the infectious diseases seem to play the most important part.

Syphilis presents itself in one of three forms: (a) suddenly without apoplectic seizure; (b) suddenly with apoplectic seizure; (c) gradually and insidiously—this last is far the most common form.

Ménière's disease seems to be still a ground for conflict of opinion as regards its origin. Politzer insists, in his *Treatise on Diseases of the Ear*, that it is caused by an exudate into the internal ear, with no previous involvement of the middle ear; while Gradenigo in Schwartz's system makes it depend on a previous involvement of the middle ear. In either case it does not occur very often in this series of cases.

II. *Diagnosis.*—With our perfected methods of diagnosis we are still liable to error in a certain number of cases, and exceptions occur not rarely to the common rules. In this connection it is of interest to refer to the case of brain tumor, previously cited, where the post-mortem examination permitted an accurate investigation of the labyrinthine symptoms.

It is taught by Politzer, Gradenigo, and others, that in diseases of the auditory nerve a break in the continuity of the musical scale is characteristic. The history of this case is briefly as follows:

Otto K., age 53 years, presented himself at clinic, February 1, 1894. He stated that four days ago he suddenly lost hearing in right ear—no previous attack. A self-test showed watch in contact, formerly two feet or more; no specific history. Examination of M. T. negative. Watch contact. Voice two feet. Tuning-fork— $c \frac{23}{18}$ ,  $c_2 \frac{26}{10}$ ,  $c_2 \frac{35}{20}$ ,  $c_3 \frac{15}{4}$ ,  $c_4 \frac{11}{3}$ .

The left M. T. was sclerosed and drawn in. Watch, seven feet. Voice, thirty feet. Tuning-fork— $c \frac{45}{20}$ ,  $c_1 \frac{23}{10}$ ,  $c_2 \frac{55}{13}$ ,  $c_3 \frac{25}{6}$ ,  $c_4 9$ .

Patient complained of vertigo and tinnitus. Diagnosis was made of labyrinthine disease. The patient was treated with blisters, strychnine, and iodide of potash, and on December 18, 1894, reported tinnitus and vertigo gone.

Test at that time showed—watch  $\frac{30}{60}$ , voice fifteen feet plus. Tuning-fork— $c \frac{33}{27}$ ,  $c_1 28$ ,  $c_2 \frac{50}{10}$ ,  $c_3 \frac{16}{6}$ ,  $c_4 \frac{15}{6}$ .

Patient died on February 8, 1895.

The autopsy revealed a tumor in the upper temporo-parietal region extending forward to the left, probably sarcoma.

Paresis of the right side.

It will be noticed that, instead of any break, the series was well preserved. Bone conduction was by no means lost for any fork, and for the high fork was actually better than in the left ear. What is still further interesting, his symptoms were relieved and hearing restored, in spite of the fatal termination.

We will refer still more briefly, as of possible interest, to the tests in a case of hemorrhage of the labyrinth, seen three months after onset.

C. F., age 55, presented himself with the history that, in an attack of bilious fever, while vomiting, felt something break in the ear—great loss of hearing. Tinnitus and vertigo at once ensued, and have continued since. Here watch and acoumeter gave no response; voice, 3 inches; tuning-forks— $c \frac{12}{7}$ ,  $c_1 \frac{9}{3}$ ,  $c_2 \frac{9}{6}$ ,  $c_3 \frac{5}{6}$ ,  $c_4 \frac{6}{6}$ ; Weber in the better ear. Response to Galton whistle normal.

This patient greatly improved under the use of iodide of potash. Here will be noticed virtual destruction of hearing, the loss of response of the intermediary forks, but the preservation in reduced degree of the high and low forks alike for A.C. and B.C.—and, what is most striking, that in so typical a case as this the response for Galton's whistle was perfect.

III. *Prognosis*.—It must be confessed that, except in syphilitic conditions, the prognosis of conditions of the internal ear, primary or secondary, as shown by the results in the above cases, is not very encouraging.

Out of the 163 cases reported, 19, it will be recalled, were cured or relieved—roughly about 12 per cent. Of these 19, 6, or one-third, were certainly specific, and 4 were possibly so, or more than half.

In the cases investigated it will be noticed that no study has been made of the 176 cases of mixed disease. It can with great confidence, however, be asserted that the result of treatment in these conditions was alike discouraging.

IV. *Treatment*.—Finally, what can we learn as regards the plan of treatment in these conditions? In the report of successes secured by the several writers mentioned above, pilocarpin seemed to play the most important rôle. The only drug which seemed to be attended with any good results, in the 19 cases just mentioned, was iodide of potash. Treatment to the middle ear was beneficial in certain instances.

Beyond question, as regards infectious disease, the proper course is a prophylactic one, including careful attention to the mouth and nasopharynx. In the case of actual occurring hemorrhage or effusion, the most absolute freedom from all noise is to be insisted on. Local depletions and counter-irritations by means of blisters to the mastoid are indicated. Cardiac sedatives, and purgatives are in order. On the cessation of the acute symptoms, injections of pilocarpin are to be begun. The status of this drug, even after the number of years it has been used (12 years), has not been fully determined. Politzer, as noted above, advocated it, principally for specific conditions; but others have gone further, and employed it in all conditions, with varied success. Unquestionably its greatest value is in the acute conditions.

Politzer recommends ten injections of ascending doses, of a 2 per cent. solution, given daily; if, at the end of this time, no benefit is obtained, the drug is to be stopped. Other observers have claimed that this time was altogether too short, and that their success has been achieved by continuing its use for at least seven weeks.

The case of Moos noticeably shows that it is of value in just such cases as are under consideration. In any case, we are justified in giving the drug a fair trial, but it is always to be followed by iodide of potash in full doses.

As regards the chronic conditions, our prognosis is well-nigh hopeless, and our treatment must consist, if we would even attempt any cure, in the use of internal medication, especially the use of the two drugs just mentioned. Surgical interference for these chronic conditions, such as removal of the stapes, as practised by Blake and Jackson of Boston, has proven of no avail, and often aggravates the symptoms.

Mention must be made of the electric masseur employed by Dr. Clemens with benefit in certain cases. The principle is one of automatic massage to the drum and ossicles, very rapidly repeated by means of an electric current. Reference also must be made to the educational methods recently brought forward by Urbantschitsch, and used by him with benefit in a number of cases of apparent deaf-mutes.

To the large group of cases known as mixed, a trial of treatment to the middle ear by vapors, etc., is certainly warranted. And in certain cases a relief of the atmospheric pressure in the middle ear will greatly ameliorate tinnitus and vertigo, at least temporarily.

Any marked improvement or cure, however, can neither be expected nor encouraged.

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#### Otalgia as a Manifestation of Influenza.

Dr. D. Kaufmann, Vienna, says in some cases presenting this symptom, the individuals had moderate fever (*New York Medical Journal*, Feb. 13th, 1897); but the aurial pain was intense, and lasted from three to nine days. No evidence of an inflammatory process could be observed on examining the ears. The author believed these cases to be examples of pure otalgia, constituting an abortive form of epidemic influenza.

M. D. L.

## REMARKS ON INFLATION OF THE MIDDLE EAR.

BY THOS. F. RUMBOLD, M.D., ST. LOUIS.

We employ middle-ear inflation to accomplish two purposes: one to remove abnormal secretion from the Eustachian canal; the other to cause, by passive motion, the return of the abnormally-placed ossicula auditus to a more normal position.

### UNPLUGGING THE EUSTACHIAN TUBE.

The principal object of air-inflation is to drive a collection of air-obstructing, abnormal secretion that is lodged in the Eustachian canal into the middle-ear. If this irritating plug could be removed without driving it into the middle-ear it would be far better; but this is impossible. The injury that this plug produces in the middle-ear is far less than in the Eustachian tube. In this canal it not only helps to maintain the Eustachian mucositis, but does far greater injury by preventing the air from passing up the canal to the middle-ear, to the positive injury of the whole organ of hearing. In the middle-ear, especially in the case of the young, the secretion is soon absorbed; while in the canal it by itself induces and maintains an active congestion, by causing the air in the middle-ear to become abnormally rarefied, thus acting as an air-pump in drawing blood to every portion of the organ. This is a very serious condition, and should be relieved as soon as possible.

It is evident that as soon as the treatment of the case progresses so far as to cure the Eustachian mucositis, so that there is no excess of mucus in the canal, then the air-douche, as it is frequently called, should be discontinued, because in the young especially there is nothing to be gained. Not only that, but injury would assuredly be done, for the reason that the normal air-density in the middle-ear is that of slight rarefaction. It is an axiom in medicine never to thwart the efforts of nature; and nature, in her endeavor to give us good hearing, ingeniously rarefies the air in the middle-ear, not only of man, but of all animals that have Eustachian tubes. Even in cases of perforation of the membrana tympani, if this canal is free of muco-purulent secretion, inflation will be of no benefit, and very frequently will be harmful. I have observed this many times, by testing the hearing with the watch before and after inflation. A good indication of know-

ing when to discontinue the use of the air inflation is to test the hearing before inflation and then afterward. If the hearing is not increased by the inflation, then inflation will certainly do harm.

#### UNILATERAL INFLATION.

There are times when one middle-ear cannot be inflated without causing a painful sensation in the other. To avoid this, I direct the patient to close the auditory meatus of the painful ear by pressure upon the tragus with the fore-finger. This pressure prevents the excessive outward movement of the drum-head, which is the cause of the pain, by condensing the air on the external side of the membrane, so that the outward movement is greatly decreased.

The force applied to send the air into the Eustachian tube should be such as will only be sufficient to drive the abnormal secretion into the middle ear. It seems to me that the employment of excessive force, such as must result from compressing the rubber air-bulb suddenly and with all one's might, must be very harmful. Generally but little force is required; even the eructation from the stomach will sometimes completely fill the middle-ear, so as to cause the person to swallow so as to allow some of the redundant air to escape, to the relief of discomfort and deafness. This plainly demonstrates that this canal is not so very difficult to open. May be some one will say that the Eustachian tube is so completely closed that it requires this degree of pressure to open it. This I doubt; and if it is so, this method of opening it will certainly result in complete failure.

I do not prefer the use of water in making this inflation. The act of deglutition makes a complete and too unyielding closure of the pharyngo-nasal cavity. In this condition there is a liability for the air to be too strongly forced into the middle-ear, so that pain may be the result, which may do more harm than good. The ear is so delicate an organ that we should not run the least risk of doing it even a slight injury, especially at a time when it is already invaded with a serious inflammation.

The employment of a method that will result in forming an easily-yielding closure of the pharyngo-nasal space is, in my opinion, very much better, because safer from over-pressure in the middle-ear.

To do this, we only have to ask the patient to pronounce forcibly and distinctly the word "what," and then to hold on to the "t"-sound of the word. This "t"-sound is held as it were by the pressure of the tongue upon the hard palate. Should the first effort fail to inflate the ear—that is, if the patient does not hold to the "t"-sound by firm upward pressure of the tongue—then have him try again, and this time direct him to use a little more force of the lungs. As there

is no disagreeable effect following this procedure, there is no difficulty in getting the patient to employ sufficient force to inflate the middle-ear.

The "t"-sound can easily be held for fifteen seconds if required, so that the continuous air-pressure can thus be maintained on the middle-ear. At the same time if this length of pressure or the force be too great, the patient will involuntarily and instantly relieve it by the simple act of his tongue, allowing the compressed air to instantly escape from the mouth. This is a slight modification of Gruber's method.

In infants and children to the tenth year of age this word-closure of the soft palate is not required. All that is required is to place a nose-piece—large enough to completely fill the opening—into one nostril, and allow the air to pass in a uniform stream; then in a few seconds the desired result will be attained, even without closing the other nostril, as the passage of the air will invariably cause some motion or action of the soft palate, resulting in the act of deglutition, which closes the pharyngo-nasal cavity; the excess of compressed air escapes from the other nostril.

In my experience I have frequently noticed that after inflating the ears of children the hearing, which had been very greatly increased, would in even ten to fifteen minutes be decreased fully fifty to eighty per cent., and in some few instances a greater decrease will be observed. In such cases I have had them remain in the office to receive a few additional inflations, about once every fifteen minutes, for from three to five times, all the time observing that not the least disagreeable sensation is produced; on the contrary, the patient should express relief. If possible, this expression of relief should be nearly as possible be voluntary, as the answer to direct questions is not always reliable, for the question must necessarily indicate, in some degree, the answer desired. It is very important that the physician should not be deceived, even unintentionally.

Not infrequently the spray of warm vaseline passed into the anterior nares of infants will produce the desired effect. If the little patient makes a sudden start while the spray is being thrown into the nostril, this is an evidence that it has experienced a sudden opening of the Eustachian tube. The sudden entrance of air will cause a sudden noise or crack in the ear, which will cause the child to jump or start.

#### LIBERATING THE OSSICULA AUDITUS.

There is another object in the inflation of the middle-ear cavity that has been generally advocated for quite a number of years, and that is, to cause very gentle outward motion of the abnormally situated ossic-

ula auditus. I am not so strong an advocate of this as I was some years ago, as it may in a few years be shown that even this degree of thwarting of nature's method of giving good hearing may be more injurious than beneficial.

I think that it requires many years of close observation to determine some of these extremely nice points in the management of ear-ailments, and of the relation of the physiology of the ear to its pathological condition.

I have had, in the 70's and 80's, what I then thought was many good results from passive inflation of the middle-ear in cases suffering from excessive in-drawn conditions of the membrana tympani. In the last six or seven years I have done much less inflating of the middle-ear, and it seems to me—assisted by the patients' voluntary statements—I have been as fully as successful as when I gave repeated inflations, and in a few cases I seem to have been more successful without the inflations. In these cases I invariably, as already stated, test the hearing before inflating, and then after inflation; if the hearing is not improved by inflation, or the patient does not express any sense of relief, then I discontinue the inflation, at least for some weeks. If, after this, the inflation has no relieving effect, I make no further use of it.

I have said nothing concerning inflation with the Eustachian catheter or spray producers that throw a stream directly into the mouth of the canal. I have no use for the former instrument. I discontinued its employment over twenty years ago because of its excessively irritating effect in the mouth of the tube. The Eustachian sprayers are only required in a very few cases of patulency of the Eustachian canal, and even in the majority of these cases, the sprayers that treat the pharyngo-nasal and post nasal cavities are far better instruments.

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#### Hereditary Gout of the Ear.

The author, D'Aguanno, first describes the pathology of the affection, and then gives the history of three cases in which deafness developed as soon as the patient arrived at the age of puberty. There was no hereditary luetic history or disease of the naso-pharynx. The father had been the subject of gout for several years. From these facts the doctor believes himself justified in saying that in hereditary gout there is a form which affects the ear at the age of puberty.—*Rev. Internat. de Rhin., Otol., et Laryngol.*—*American Medico-Surgical Bulletin.*  
S. S. B.

## HYSTERICAL DEAFNESS AND REPORT OF CASES.

BY F. PIERCE HOOVER, M.D., NEW YORK.

During the past year, several of the above-named cases have been treated by me which have previously been diagnosed labyrinthine disease, and told they would be permanently deaf by the doctors who had examined them. Two of these cases were regular habitués of clinics and dispensaries. In some, the deafness was comparatively recent; in others, it was of years' duration. In not more than three or four cases did I learn, after much questioning, that patients were of a nervous tendency, or that their family were predisposed to any nervous disorder. I speak of this, as I think a doctor cannot gain *too* much information pertaining to a suspected case of the kind mentioned above. One case, of special interest to me, I had under my observation for a number of months, for labyrinthine disease of both ears, and only by chance did I find I was mistaken in my diagnosis, and then by the merest accident. One day, while examining her ears, my lamp chimney cracked. The patient, a woman 40 years old, jumped and looked round; she claimed, however, she heard nothing. I did not believe the assertion, as only a few days before she could not hear the voice, unless at a very loud pitch, one foot from her; watch and tuning-forks not at all. At next visit, being alone with patient, had office boy come to me and say in a low voice: "That lady's dress is on fire"; she at once screamed "Put it out quick," and ran from the room. I prescribed asafetida pills, gr. v., three times a day, plenty of exercise and fresh air, etc. Later, she went to Atlantic City; was greatly improved after an absence of two months.

Have used the battery with very good result for a short time *daily*, with outdoor exercise. Have had at least a dozen cases of the kind. Some patients would neglect themselves, believing they could never hear, or else were indifferent, having tried so many remedies, and paid out so much money for doctors' bills. Recently, I had a thin, emaciated man come to me at the Manhattan Eye and Ear Hospital with a nervous twitching of his face and body, who stated for the past four months his hearing was getting worse. He was impressed with the idea he would lose his hearing entirely, and had felt for more than a year that he would be like his aunt and grandfather, who were also deaf. The former, I learned, had typhoid fever when young, and the

latter was 92 years old. Upon examination, I did not feel positive of my diagnosis of labyrinthine disease, although every indication would lead me to think so. After using every test, I deemed it advisable to have him attend the nerve clinic. He rapidly improved, grew stronger, and felt in many ways physically like another man; but, if he knew I desired to test his hearing, he always claimed he heard no better. I detected, however, that he really did hear, in various ways unsuspected by him; as, for example, dropping a pencil behind his chair, which he heard fall and picked up.

Last December a patient came to hospital for her "ears to be cleaned out, as she knew the wax made her deaf." I found canals clear; T. F. heard normally in both ears; watch, finger nails, and acoumeter heard not at all. She insisted I was mistaken in not finding wax, and left clinic angry. She returned a few days later, with great pain and ear discharging. In her endeavor to pick out cerumen, she used a darning needle, and she had suffered ever since. When her ear had been cured of the discharge, her hearing returned. She insisted that the wax had softened by the "watery flow" from her ear, and thus was passed out when she was unawares, while lying down or asleep on the affected side. At last visit heard watch 18 inches, voice 12 feet, and T. F. same as previously mentioned. In my opinion, this was another case of hysterical deafness. Other cases of the kind I could mention, but do not care to make this article too long. I only desire to impress upon the readers of the above that they may sometimes run across such cases, and surmise they are of a more serious nature, as I was led to believe.

Hysteria usually, in my opinion, is a mild form of insanity, and is a symptom produced by morbid conditions, which may arise in the brain primarily, or from some depraved condition of the general system, more frequently seen in the female than the male. All but two cases under my observation were females.

143 W. 45th St.

#### Dr. Rumbold,

Of St. Louis, Mo., thinks that every person who is obliged to use a handkerchief has an irritated condition of the nasal mucous membrane. By the same token, we can safely reason that the inventor of the handkerchief had catarrh!—*Ec.*

Certainly.

## TREATMENT AND PROGNOSIS OF CATARRHAL DEAFNESS IN YOUNG CHILDREN.\*

BY J. ALOYSIUS MULLEN, M.D., HOUSTON, TEXAS.

As we live in an age of preventive medicine, the importance of otitis media catarrhalis hypertrophica in very young children engages our attention from a prophylactic standpoint, and directs our endeavors to the isolation of the causes of this condition, and suggests the means by which they may be irrevocably removed and their results corrected, so that the consecutive pathological changes of chronic hypertrophic aural catarrh will have been prevented from occurring, thereby rescuing the patient from years of auditory incompetency and suffering.

There is a prevailing impression among the general profession, fostered and promulgated to a great extent by the text-books, that the prognosis of catarrhal deafness is more grave to the restoration of hearing, the younger the patient. In other words, the more juvenile the patient the more difficult it is to successfully treat these cases and carry them to a place of auditory safety.

The universality of this erroneous idea has rendered the profession, in its consideration for these cases, prophylactically apathetic, and has permitted numerous children to become men and women greatly handicapped in life by severe and permanent obtundity of a very appreciable sense, hearing.

Children are in the formative period of their physical as well as their mental lives; and in children deafness is very frequently overlooked, or is not attributed to its true cause, and is so not made a matter of treatment.† So then that any therapeutic or surgical assistance rendered them during this time will be far more apt to remove the causes of catarrhal deafness and prevent the pathological changes in the middle-ear contents and drum, so tending to permanency and dangerous to hearing and the development of this sense *pari-pasu* with the other special senses which at this time more than any other depend so largely upon the assistance of audition for their associated action and development. Furthermore, if these cases are

\*Read before the Southern Section of the American Laryngological, Rhinological and Otological Society, New Orleans, La., March 3d, 1897.

† "System of Diseases of Ear, Nose and Throat," Burnett (Sexton), Vol. II., page 328.

allowed to progress and their hearing become seriously affected, *paripasu* with the development of this obtundity, the functional activity of the auditory center is nullified from non-use, the degree of which depending upon the length of time and the character of the cause of deafness. This same narcosis of function may occur in any center or member of the body when the same is not in active use.

This point I have taken especial care to bring more fully before the profession at the last meeting of the Texas State Medical Association.\*

The causes of deafness in young children primarily produce obstruction either of air or circulation; they render the free passage of air difficult, and contribute to frequent circulatory disturbances, no matter what may be the character of the nasal, tubal or pharyngeal disease present.

The obstruction interferes with the free entrance and preparation of air into the middle-ear, and also with the free circulation of blood in the mucous membrane lining the entire air tract.

The common causes of catarrhal deafness in the very young, are nasal polypi, hypertrophic rhinitis, adenoids, enlarged tonsils, etc. These produce obstruction of the air passages; materially interfere with the proper amount and normal preparation of air; while they also, with acute rhinitis, acute naso-pharyngitis, and acute salpingitis, produce catarrhal inflammation of the Eustachian tube, mucous membrane of the tympanum, and disturb the equilibrium of the circulation in this region.

The report of the following cases it is hoped will bring this subject under general discussion and serve to demonstrate the treatment used, and afford a modification of the generally accepted prognosis so frequently given by the profession at large, and to condemn the advice that "the child will outgrow his deafness."

C. B. and J. B., brother and sister, aged respectively 7 and 9 yrs. Both mouth-breathers; they also had hypertrophic rhinitis and enlarged tonsils. Bone conduction + in both children and in both ears. It is heard by boy, R.E. 3 inch, L.E. 1 inch. The girl had same dullness. Whisper not heard in L.E. of either child, and with difficulty in the R.E. Voices had changed in character and intensity, with noticeable inattention and lack of interest in their studies. Tinnitus present in both cases. Drums appreciably retracted and not freely movable. The rest of my cases show approximately the same histories, with the occasional presence of adenoid or polypoid growths. These two cases serve as a type sufficient to illustrate this class of cases and render the detailing of similar ones unnecessary.

\*Texas State Medical Association Transactions, April 23d, 1896.

The treatment adopted was in general terms about the same in all cases of catarrhal deafness in the young that come under my observation. It consists in the removal of adenoid or polypoid growths, hypertrophic tonsils, and the reduction of thickened nasal mucous membrane, combined with naso-pharyngeal and aural medication.

Fused chromic acid crystals were applied to pin down the hypertrophic mucosa. The patency of the Eustachian tubes must be insured; so also must there be guaranteed the free circulation and preparation of air, the prevention of vacillations of the circulations due to congestions, etc., or else treatment applied to deafness in the very young will not be productive of any permanent results, amounting merely to a waste of time and energy in a large number of cases. After the thorough removal of all obstructions, I place more reliance in the daily use of the Seigel pneumatic speculum with Politzer bag attached than in any other appliance or form of corrective treatment.



FIGURE 1.

The membrana tympanum and ossicular articulations should be exercised gently every day for a sitting of three to five minutes' duration, with the speculum and Politzer bag attachment (Fig. 1). The membrana tympanum to be under illumination all the time. If indicated, the child should be given an alternative to improve the general health.

The hygiene of these cases is not by any means a matter of small importance, but should be considered of great utility and usefulness. The temperature of the sleeping apartment should be regular, and the air pure and easily renewed. Heated rooms absorb the nasal and pharyngeal secretions, and facilitate mouth breathing with all its at-

tendant evils. These children should also be prohibited from sleeping in the same room with persons who have enlarged tonsils or any chronic throat affections; and care exercised to keep them from going out in the night air. All forms of treatment for these little ones should be guided by mildness and gentleness; and always bear in mind that tissues are being dealt with which admit of great benefit or severe injury; and never abuse the confidence of childhood. Furthermore, the aurist has not thoroughly completed his work and accomplished all possible for his little patient unless, after the removal of adenoids, enlarged tonsils, etc., he use some form of corrective mechanical treatment calculated to restore the transmitting structures of the middle ear to their conducting acuity.

602 Main St.

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#### Connection Between Word Deafness and Deafness.

Word deafness has hitherto been ascribed to a cerebral lesion, but Keller and Freund have recently been impressed with the important connection between it and disturbances of the ears, especially of the labyrinth, which is able alone to cause word deafness. They urge the necessity of investigation of the ears in such cases. Keller asserts that isolated speech deafness, with retained ability to comprehend other sounds, often corresponds with bilateral affections of the labyrinths, and is dependent upon tone-gaps in that portion of the tone scale which is physiologically important for the comprehension of speech. It sometimes happens that bilateral ear affections which in themselves are not sufficient to cause word deafness, produce it by a secondary degeneration of the nerve tracts and auditory centers. It requires such supreme efforts of attention then to hear that the patient gradually renounces the attempt, and lack of use hastens the degenerative processes. This is demonstrated by Urbantschitsch's system of ear gymnastics, which does not so much improve the hearing as it arouses and practices the faculty of comprehending what is heard. Pick's case is instructive in this respect. The patient was exceedingly hard of hearing with word deafness also, and yet no lesion of the ears could be ascertained. The necropsy revealed, however, great alterations in the temporal lobe, to which the sensory aphasia was undoubtedly due.—*Deutsche Med. Woch.*

S. S. B.

## CLINICAL REPORTS.

### TWO INTERESTING CASES.

BY JOHN B. KEBER, M.D.

Professor of Diseases of the Skin and Syphilis, Beaumont Hospital Medical College,  
St. Louis.

#### Triple Specific Infection.



FIGURE 1. Triple Specific Infection.

CASE I.—M. B., printer, age 21, applied for treatment June 23rd, 1896. He stated that about four weeks previously he had noticed the lesions on the upper lip, penis, and left cheek as small papules. They appeared about the same time, gradually increased in size, became eroded and indurated, but gave rise to no pain and little inconvenience. He, therefore, hardly gave them a thought. An eruption had made its appearance on his body within the past few days, and for this he had applied for treatment. This eruption was readily recog-

nized as a maculo-papular syphilide. Date of exposure could not be determined. The interesting feature in the case consists in the triple infection, giving rise to three initial lesions in regions widely separated. *Practically*, the case offered no difficulties, as the complex of symptoms was complete; *theoretically*, however, it presents many points of interest, but as their discussion would hardly come within the scope of this journal, it will be reserved for a future paper. The illustration shows the salient features of the lesions on the lip and cheek, the lesion on the penis having been omitted.\*

#### Initial Lesion of the Tongue.

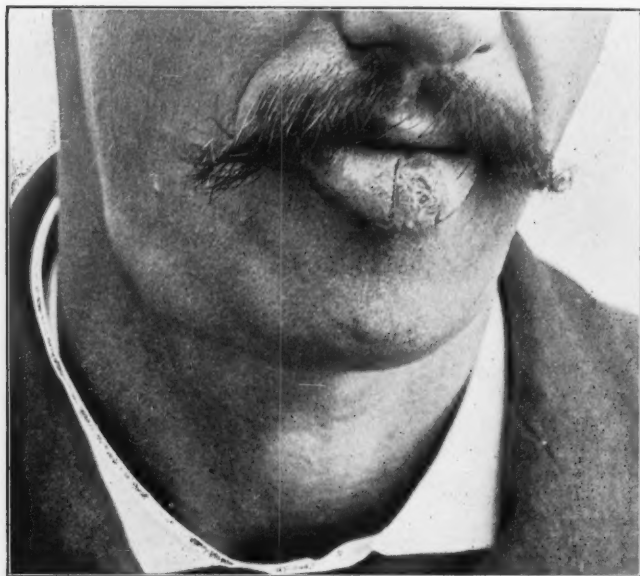


FIGURE 2. Initial Lesion of the Tongue.

CASE II. is interesting from a practical standpoint, inasmuch as the patient presented himself so early after infection that the importance of the lesion might easily have been overlooked. He stated that about ten days before, in using his knife as a tooth-pick, he had slightly wounded the tip of the tongue. The cut healed promptly, but three

\* THE LARYNGOSCOPE will, on application, send a full length illustration of this case to any subscriber remitting a two-cent postage stamp.

or four days before consulting me he noticed a small spot as large as a pinhead covered with what he thought was a white membrane. Attempts at its removal proved a failure, and, as the spot increased in size from day to day, and inconvenienced him some by striking against the teeth, he called upon me for treatment. Inspection showed a lesion on the tongue, about one-quarter of an inch from the tip and a little to the left of the median line. This lesion was about the size of a lentil, slightly elevated, pearly white in color, and surrounded by a dark red halo about one line in width. It was perfectly round (later oval), sharply circumscribed, and on superficial examination seemed nothing more or less than a membranous deposit on a slightly congested base.

Closer inspection showed, however, that this was a mistake, and that the lesion really consisted of a small papule covered by a thickened and opaque epithelium. Palpation revealed a slight increase in the consistency of the part. The neighboring lymphatic glands were apparently normal. As the result of a process of exclusion, a probable diagnosis of "initial lesion" was made, and the patient instructed to report daily. The lesion increased slowly from day to day, its general character remaining the same, and in four or five days had attained the size of a split pea. Induration was now easily recognized, and the submaxillary glands on the right side showed signs of involvement. The centre of the lesion became depressed, and as the lesion grew in extent, gradually became eroded. The photograph was taken at the end of the second week, and shows the fully developed lesion, as well as the enlargement of the glands. At the proper time a macular syphilide made its appearance. Constitutional treatment was at once begun, and resulted in the rapid disappearance of all symptoms.

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#### Ethmoiditis.

Dr. J. F. Barnhill (*Ind. Med. Jour.*) says that in simple cases the treatment should consist in removing all obstructions to the free drainage of the cells, and the application of soothing washes or sprays. In chronic cases he advises that a portion of the middle turbinated bone be removed, and that all the suppurative cells be converted into one cavity, if possible, by means of the curette or drill. The subsequent treatment should consist of hot antiseptic douches. Vigorous constitutional treatment will be needed.

By following this line of treatment all will be improved and many cured, but the patience of both surgeon and patient may be severely taxed.

## NEW INSTRUMENTS.

### A MECHANICAL SAW AND SEPTAL PLANE.

L. L. MIAL, M.D.

Assistant Surgeon to the Manhattan Eye and Ear Hospital.

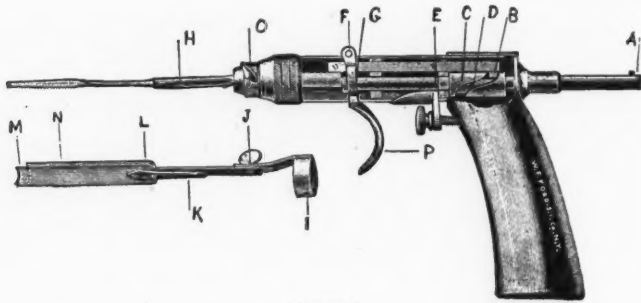


FIGURE 1.

The cut showing as it does, with the outside case removed, the mechanical combination of this instrument renders few words necessary for its description. I claim for it:

- 1st. Minimum vibration, enabling the operator to hold it with ease.
- 2nd. By the brake device (PFGE; friction is applied to the main shaft at E) we have the speed of the stroke absolutely under control, using a fast or slow motion as we may desire. No other instrument has such a feature, and I regard this one of the most important in the manipulation of such a saw.
- 3rd. The septal plane, which is nothing more nor less than a chisel, M, made from *very thin* hard steel running in a guard, L N, also *very thin*. It will be seen from the cut how the attachment is made. The handle K attaches to the saw rod at H, the ring I fitting over the end of the case at O and secured by a screw. Now applying the power, the plane is driven fore and aft just as the saw. The depth of cut at each stroke is regulated to a nicety by the slide and screw at J; usually  $\frac{1}{64}$  of an inch is the best set to give. These plane attachments are made in numbers of sizes and shapes just as trephines and

chisels. I find the curve or gauge shape the most satisfactory as a rule, and the F shape very efficient in making a section from enlarged inferior turbinates.



FIGURE 2.

The saw is the same as that shown here. This was devised nearly two years ago, and has been used by myself and colleagues since that time with great satisfaction. I may safely say that we have found it to cut faster and with less binding and sticking than any saw previously used. It differs from others in having a curved blade (the straight blade in the cut should be shown curved in opposite direction from the curved one) in which the axis of each tooth is along the radius of the circle of which the curve in blade is a segment. It will be seen that this gives the rear teeth a forward set, and the anterior teeth a rear set, cutting therefore on both forward and backward stroke.

It has not been my intention in presenting these instruments to show anything so specially new, but to give some improvements by which our septal operations could be facilitated. My thanks are due to Mr. C. F. Ford, of the W. F. Ford Surgical Instrument Co., for his untiring efforts and valuable suggestions in producing these instruments.

145 West 12th Street, New York.

## ON THE USE OF INCANDESCENT LIGHT CURRENT FOR GALVANISM, FARADISM, AND ELECTROLYSIS.

BY J. F. OAKS, PH.C., M.D., CHICAGO.

Professor Otology, Rhinology and Laryngology in the Chicago Eye, Ear, Nose and Throat College; Professor Otology Harvey Medical College, Etc.

The general introduction of the electric current for commercial purposes and domestic lighting has made it very desirable that some inventive genius would make it possible to utilize the same by the electro-therapeutist without fear or anxiety.

As a result of active research and experimentation in this field, I am prepared to give my testimony in favor of the "Shunt-Coil" (for use

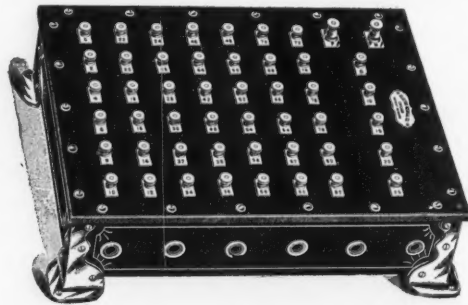
on the direct incandescent light current), as designed by Dr. Wagner, and made by the Electro-Medical Co.

In this instrument we have found the merits of precision, uniform constancy, absolute safety, and thorough reliability.

The graduations of voltage are very fine, and so accurate as to vary only within one per cent., making it possible to obtain the desired regulation of voltage independent of amperage.

The advantage of this instrument to the general practitioner and specialist must be apparent. It affords him absolute control of the current in precisely the same manner as if cells were used for galvanic, faradic or electrolytic purposes, with none of the annoyances attending a large number of battery cells, which require from time to time recharging and repairing, are liable to get out of order and "to strike" on the least provocation, at the expense of the loss of temper on the part of the physician and the discomfiture of the patient.

The "Shunt-Coil," as here illustrated, has been in my office for the past few months. It has not only more than met my expectations, but has fulfilled all the requirements of a galvanic battery, and without any care for one moment of annoyance or trouble.



In electrolytic work, where milliamperage is the active principle of the current, and which should be obtained (as is the case in this instrument) with the least possible electro-motive force or voltage, the operation of electrolysis (as for epilation) is much less painful than it would be with higher voltage.

I have experimented with various rheostats and current controllers for utilizing the incandescent light current, but have found them impracticable as well as unreliable and dangerous.

The "Shunt-Coil," instead of choking down the current strength by decrease of amperage only, as is done by the various forms of rheo-

stats, is so constructed as to utilize only a portion of the current strength of the main circuit by shunting or tapping, so to speak, the main current, as is more fully explained in the catalogue of the Electro-Medical Co.

The fact that the voltage of the main circuit does not directly affect the voltage of patient's circuit makes it absolutely safe, and relieves the mind of the operator from the worry of a possibility of painful shock or damage to the patient.

I take pleasure in announcing that at an early date I will make additional comment in the pages of *THE LARYNGOSCOPE* on the "Shunt-Coil," with histories of some interesting cases treated by galvanism and electrolysis.

1202 Champlain Building.

#### A NEW MECHANICAL SAW FOR SEPTAL OPERATIONS.

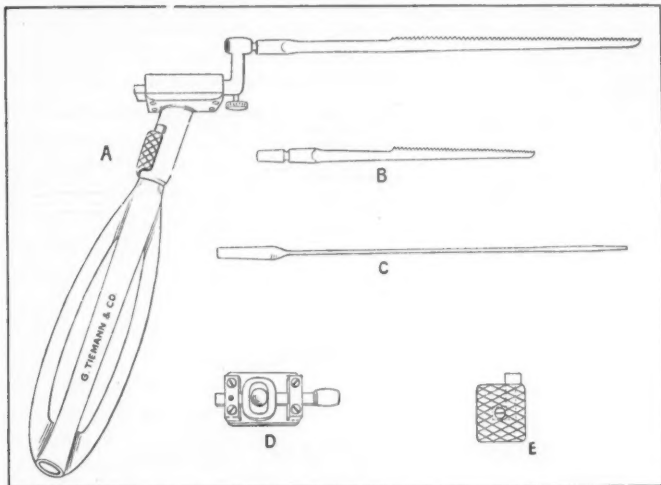


FIGURE 1. The Schepppegrell Mechanical Saw (reduced  $\frac{1}{4}$ ).

The mechanical septal saw devised by Dr. W. Schepppegrell, and which was described in the last number of *THE LARYNGOSCOPE*, is shown in the adjoining figure. It is made by Messrs. Geo. Tiemann & Co., New York.

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## EDITORIAL.

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### CONSERVATION IN NASAL SURGERY.

The too frequent surgical interference with the nasal turbinates in rhinologic practice of recent years is partially due to a defective knowledge of the pathology of the region involved. The turbinates of the nose are the *locus minoris resistentiæ*; perhaps even the *safety valves* of functional disturbance in many other parts of the body. It is the scapegoat which exhibits the results of unhygienic surroundings, faulty diet, lack of exercise and intemperance, and forms a

complication in most of the exanthemas and a large number of functional and organic derangements of other organs of the body.

The necessity of proper nasal respiration was impressed upon the rhinologic student, without, however, sufficient importance being laid on the relation of this mucous membrane to other conditions of the body. The most direct method, therefore, of restoring an obstructed respiration appeared to be the removal of the obstruction. Where this obstruction to nasal respiration is a deviation or thickening of the septum, a tumor or a true hypertrophy, the principle is correct. In the majority of cases, however, the obstruction is simply a passive congestion or hyperemia, and the removal of this by the electro-cautery or other means gave simply temporary results. The same causes which produced the original lesion still existed and caused a prompt return of the obstructed breathing.

On account of the rapid return of the nasal obstruction in many cases, a radical measure was at last suggested—turbinectomy—the total removal of one of the important portions of the nasal organ. This operation, of course, affords a passage for the air; but the total extirpation of the turbinate, while removing an obstruction, also removes an important factor required for obtaining the benefits of the operation. The injurious effects are due not only to the loss of so large a portion of the nasal mucosa, which plays so important a role in respiration, but also to the fact that the physical conformation of the nostrils has been altered. The removal of the turbinate increases the calibre of the nostril operated upon, which thus receives a larger portion of the respired air; but instead of having its functional capacity increased for this double duty, it has been handicapped by the removal of a considerable portion of the mucous membrane required for this purpose.

This radical measure, however, was not without its good result; it was the signal of the reaction; and now there is hardly a meeting of a prominent laryngological society in which papers advocating greater conservatism in rhinologic practice are not presented. Such articles will stimulate the rhinologist to examine more closely into the pathology of the region involved, and will cause him to remember that the nose is not an isolated organ, but forms a part of a complex system, each organ of which is, to a certain extent, dependent upon the other, and that the normal condition of one is dependent upon the normal condition of the remainder. With a true understanding of this principle, the results will be such as to react to the benefit of the patient and to the reputation of the specialist.

SCHPEPPGREGELL.

### THE VENTILATION OF LIVING ROOMS.

Effectual ventilation of dwelling houses is well known to be a most difficult problem, and the discussion of it from an architectural standpoint would here be out of place. The laity now-a-days is impressed with the importance of pure fresh air indoors, and endeavors to provide for it, according to individual notions and prejudices, in a variety of ways. These efforts are strictly empirical, and are so often at variance with common sense and intelligent judgment as to warrant comment, since the comfort and health of the household are not seldom sacrificed to fanatical hygienic zeal.

Some individuals, for instance, need to be told that warm air is not necessarily impure, however oppressive its effect, even though the room "feels close." One can fairly diagnose the nervous status of a woman who is not comfortable in a railway car unless her window is open, and a gale of cold wind blowing in to the peril of her fellow passengers. Some unreflecting persons persist in opening wide the windows of a room in which is burning a fire with vigorous draught, the latter affording abundance of ventilation.

But perhaps the most extreme notions are exhibited in the opening of the windows of good-sized bed-rooms in severe winter weather, at night. After spending the evening in a warm parlor or sitting-room, many persons far from strong disrobe in a cold bed-room and creep shiveringly into a colder bed after carefully opening the windows. Yet it is physiologically demonstrable that far less oxygen is needed and consumed by the body during sleep than during waking hours. Nature, by unerring instincts, guides the lower animals; and it is pertinent to here inquire what amount of ventilation exists in the narrow quarters occupied by the hibernating bear, or what amount of fresh, pure air is breathed by new-born suckling kittens, apparently smothered beneath the mother cat!

Pure fresh air is undoubtedly a great desideratum; but the proper ventilation of dwellings by their inmates in winter would seem to be best accomplished by freely opening its apartments to sunlight and air during a portion of the day, then closing them and depending (in place of something better) upon the ventilating effects of chimneys.

The matter is worthy of attention as regards the etiology of nasal catarrh, and the views and practice of patients as to the subject of household ventilation should generally be inquired into.

EATON.

### WESTERN OPHTHALMOLOGICAL, OTOLOGICAL, LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

The Second Annual Meeting of the Western Ophthalmological, Otolological, Laryngological and Rhinological Association, held in St. Louis April 8th and 9th, was practically the first scientific meeting of this body, as the first meeting was devoted mainly to organizing. From the number, general excellence and originality of the papers presented, the animated discussions, and the enthusiasm shown, we are warranted in predicting for this young association a bright and useful career.

It may not be inopportune to state that some more satisfactory arrangement for conducting the proceedings might be made for the Chicago meeting. The association made a good move in making the qualification for membership more stringent. We understand that the Programme Committee for the next meeting intends going to work at once, which should assure a most excellent list of papers. With the material to draw from that the association has at its disposal, it should not be difficult to arrange matters so that there will be two sections: one for the eye, and the other for the nose, throat and ear. There could be a general morning session, at which the business is transacted and subjects of mutual interest discussed; the afternoon and evening sessions could then be devoted entirely to the consideration of special papers in the section in which they would be classed. The advantages of such a plan would be a great saving of time, a concentration of forces in the individual specialties, and a more thorough discussion of worthy papers.

Properly managed, with a suitable date of meeting, it should not be difficult to secure the attendance of two hundred of our interested special practitioners.

Every one qualified for membership in the West should identify themselves with this Association.

THE LARYNGOSCOPE was chosen the official organ for the Otological, Laryngological and Rhinological Section.

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### CONTRIBUTIONS TO THE JUNE ISSUE.

The June issue of THE LARYNGOSCOPE will contain original articles, editorials, transactions of the Laryngological Section of the New York Academy of Medicine, society proceedings, and the usual condensation of the principal articles from current literature. The following

list of original communications will appear in the June issue, or as soon thereafter as possible:

Dr. C. E. Munger, Waterbury, Conn.: "Retro-Pharyngeal Abscess."

Dr. E. O. Sisson, Keokuk, Ia.: "Adenoid Vegetations."

Dr. J. A. Mullen, Houston, Tex.: "A Case of Inflammatory Glaucoma of Reflex Nasal Origin."

Dr. W. C. Phillips, New York: "Localized Epithelioma of the Larynx."

Dr. J. F. Barnhill, Indianapolis: "Diseases of the Glosso-Epiglottic Space."

Dr. Seth Scott Bishop, Chicago: "Treatment of Chronic Suppuration of the Middle Ear."

Dr. Arthur G. Hobbs, Atlanta: "When not to Inflate the Middle Ear."

Dr. J. O. Stillson, Indianapolis: "Report of a Case of Double Mastoid Disease; Operations; Recovery."

Dr. J. Holinger, Chicago: "Diseases of the Labyrinth."

Dr. M. A. Goldstein, St. Louis: "Advanced Method in Teaching the Deaf."

Dr. Thos. F. Rumbold, St. Louis: "Function of the Stapedius and Tensor-Tympani Muscles."

Dr. Bretano Clemens, New York: "Injuries to the External Auditory Canal by way of the Pharynx; Removal of the Foreign Body."

Dr. Seth Scott Bishop, Chicago: "A New Electric Illuminator."

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### **Osteomata of the Auditory Canal and their Treatment.**

Dr. E. J. Moure states that the osseous obstructions of the auditory canal are usually formed of impacted tissue of ivory consistency, and are difficult to remove with cutting instruments. (*Revue Hebdomadaire de Laryng. d'Otol. et de Rhin.*, Sept. 26, 1896). It is better to remove them with a gouge than to try to reduce them with the drill, or by the numerous methods generally recommended by authors.

The radical and complete eradication is as important here as in the osseous tumors of the nasal fossa and of the face. The author relates two cases in reference to men 45 and 50 years old, who had osteoma of the canal, and at the same time suppurative otitis media. The skin was incised and a gouge passed through this opening and pushed in until the tumor was loosened and detached. If the osteoma is very near to the tympanum, it is more prudent to free the pavilion and the cartilaginous canal before attempting the operation of the tumor.

W. S.

## SELECTIONS FROM CURRENT MEDICAL PUBLICATIONS.

### RHINOLOGICAL.

#### Study of the Nature and Etiology of Simple Catarrhal Rhinitis.

Drs. Fermi and Bretschneider offer the following conclusions in regard to the nature and etiology of simple catarrhal rhinitis (*Archiv. Ital. di Otol., Rinol., etc.*, No 1, 1896):

1. Simple coryza is not a parasitic disease.
2. Many cases of coryza are due to the direct irritative action of numerous physical agents, both chemical and mechanical, on the nasal mucosa. These agents penetrate into the nasal cavity, coming either from without (traumatism, polypi, coryzas of workers in chemical products), or from within (the ingestion of iodide of potash, coryzas accompanying infectious diseases, especially in exanthemata).
3. Colds, properly speaking, are due to a vaso-motor disturbance, either trophic or functional, of the nasal mucosa. It is therefore an affection purely of a nervous nature. It is not due to the action of cold, *per se*, but to sudden changes of temperature. The affection is more especially observed when the atmosphere is charged with humidity, and in this condition the least changes of temperature are noticeable.
4. Hay fever appears in persons in whom the trophic innervation of the mucous membrane of the nose is altered in a marked manner. It may also be due to a functional alteration of the whole nervous system, whether that alteration be congenital or acquired. It is not produced directly by physical agents, mechanical or chemical, but by a reflex method following the excitation of a general or specific sensibility.

W. S.

#### The Treatment of Adenoid Vegetations by Resorcin.

Dr. Chaumier, of Tours, reports his experience with the method of treating adenoid vegetations with resorcin, which, it has been claimed, will make an operation unnecessary (*Med. Mod.*, December 23rd, 1895).

In order to give a satisfactory opinion of this method, he selected from his clinic three children who were affected with adenoids to a marked degree. Every second day an application of a solution of resorcin, 100 to 100, were made to the naso-pharyngeal cavity. At the end of nine, ten and fourteen visits the results were negative, with only a slight diminution of the volume of the growth. The only real result obtained was that there was a slight amelioration of the hearing in the children who were affected with deafness. A similar want of success was obtained in the treatment of the faucial tonsils. Chaumier, therefore, concludes that these applications have no influence on the adenoid vegetations. Except in cases of acute adenoiditis, the best method of treatment is the employment of forceps or the curette.

W. S.

#### **Perichondritis Septi Narium Serosa.**

Complete obstruction of the nasal entrance took place in a male patient fifty-three years of age without apparent cause (Dr. Josef Pollak, *Archives of Otology*, Vol. XXV., No. 4). Two pale red tumors could be seen on examination. The swelling on the septum was incised, and serous fluid was discharged. After free opening of the other swelling by means of the galvano-cautery, the quadrangular cartilage was found to be perforated by a fissure. The author believes the degeneration of the cartilage to be similar to that of *othæmatoma*.

M. D. L.

#### **Diagnosis and Treatment of Suppuration of the Ethmoidal Sinuses.**

Dr. Claoué states that, from a practical standpoint, ethmoidal suppurations may be divided into: (1) empyema with orbital manifestations, (2) latent empyema, and (3) cystic empyema (*Revue Int. de Rhin., Otol., and Lar.*, March, 1897).

Latent empyema, which is the most difficult to diagnosticate, is suspected when, in a unilateral or bilateral rhinorrhea a minute examination cannot discover a sequestrum, a foreign body, or a suppuration of Luschka's gland. The most important sign is the finding of pus below the ethmoidal bulla (for the anterior cells), or in the neighborhood of the olfactory fissure (posterior cells).

In order to diagnosticate the origin of ethmoidal pus, it is necessary to eliminate successively the other sinuses by puncture, or by catheterization followed by irrigation. If the pus reappears after this procedure, we are authorized in placing the blame on the ethmoidal cells. The methodic catheterization of the cells should then be practised in

order to locate the pus. This diagnostic measure, which is also of therapeutic value, is recommended after a personal observation of this method for several months. The thin walls are easily broken, and in the affected bone a sensation of roughness is felt. In healthy bone one often obtains a sensation which would make us believe in caries.

Empyema with orbital manifestations presents the same symptoms as latent empyema, but it is easily diagnosed on account of the symptoms connected with the eye. It must be differentiated from abscess of the frontal sinus.

Cystic empyema, or cystic dilatation of one or more cells, is noted by the pain, by the tumefaction of the middle turbinal, and the freedom of the other sinuses from pathological processes. The puncture confirms the diagnosis. The treatment consists in evacuating the pus either by the nasal or external method. The former should be used whenever practicable; but where an orbital fistula exists, or where there are cerebral or general symptoms, or an infection of grippal origin, the external method should be promptly adopted.

W. S.

#### On Empyema of the Frontal Sinus.

Dr. Ahlstrom reports three cases of empyema of the frontal sinus (*Gaz. Heb. des Sc. med. de Bordeaux*, December 13th, 1896):

1. A man of 25 years suffered from a copious rhinorrhea and painful swelling around the left eye. In the superior internal border of the orbit there was a hard swelling without fluctuation; the eye was somewhat deviated upward, and the conjunctiva hyperemic; there was chronic congestion with considerable swelling of the middle turbinal. A fistula formed at the nasal portion of the upper eyelid, and a piece of necrosed bone was discharged. The sound penetrated through this opening into the frontal sinus, which was very large. The patient refused operation, and the fistular discharge persisted.

2. In this case, a man of 66 years had suffered for six years from a fistula near the middle of the upper eyelid which discharged a large quantity of pus. By means of a bent sound a small orifice in the orbital plate could be felt. By syringing, large quantities of pus could be brought away, but none of the solution passed through the nose. A large opening of the anterior border of the frontal sinus was then made, and an attempt to pass the sound into the naso-frontal canal was without success. The drainage was then made through an artificial opening, and the case was cured one month after the operation.

3. A man of 33 years suffered from tumefaction around the nose, the inferior part of the forehead, and the upper eyelid; violent head-

aches, exophthalmos, deviation and immobility of the eye, discharge of caseous pus from the right nasal fossa, and from a fistula in the upper eyelid. By means of the sound, a defect in the upper wall of the orbit could be felt. The sinus was opened externally, and drainage made through the *ductus naso-frontalis*, but without arresting the discharge of pus. Irrigation was then made with solutions of chloride of mercury, permanganate of potash, and chloride of zinc. The suppuration ceased at the end of six weeks. W. S.

#### Cause of Rhinitis in Children.

Dr. Thos. Hubbard (*Cleveland Jour. of Med.*), in an article entitled "Some Remarks on the Causes and Treatment of Chronic Nasal and Pharyngeal Catarrh in Children," calls attention to the fact that most of our school rooms and nurseries are over-heated in winter, and to this fact ascribes the start of many of what become troublesome cases of chronic rhinitis and pharyngitis.

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### LARYNGOLOGICAL.

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#### Effect of Drugs on Secretion from the Tracheal Mucous Membrane.

1. Alkalies increase secretion.
2. Potassium iodide increases secretion.
3. Emetin markedly increases secretion.
4. Saponin in small doses does not increase secretion; in large doses it diminishes secretion.
5. Cold, when applied to the abdomen, diminishes secretion.—*N. Y. Polyclinic*, Jan. 15, 1897. M. D. L.

#### Reflex Cough.

Dr. John O. Roe (*N. Y. Med. Jour.*) states that cough is always a reflex act, and when arising from an irritation below the larynx is invariably for the purpose of expelling mucus. Where there is no expectoration, one is justified in concluding that the cough is due to irritation in the upper respiratory tract. One of the most fruitful sources of cough above the larynx is to be found in glandular hypertrophy at the base of the tongue.

**Rheumatic Inflammation of the Crico-Arytenoid Articulations.**

Dr. Sendziak reports a very interesting case concerning a patient of 18 years, who, during the final days of her pregnancy, experienced pain in the laryngeal region, with dysphagia, hoarseness, pain in several other joints, especially the elbow. Delivery took place without accidents; but the condition of the patient, far from improving, grew worse. To the symptoms already mentioned were added aphonia and fever. Laryngoscopic examination showed the posterior wall of the pharynx to be red and infiltrated. The crico-arytenoid articulations were immovable. The glottis was narrowed, and mucus was present in the inter-arytenoid fold. The father of the patient having died of laryngo-pulmonary tuberculosis, physical examination of the chest was practiced and the sputum was examined, but nothing was found to strengthen the suspicion of tuberculosis. Thinking that the disease might be a gonococcus infection originating in the vagina, the secretions in that canal were examined, but with negative result. After several days of treatment at home the patient entered the hospital. Admitting, then, the only possible hypothesis, that of polyarticular rheumatism, sodium salicylate was given, up to 4 grammes (1 drachm) a day, simultaneously with pulverizations of a two-per-cent. solution of cocaine. After eleven days of treatment the temperature descended to the normal. All the general and local symptoms, including those of the larynx, were at the same time ameliorated. Two weeks later the slight stiffness which lingered in the crico-arytenoid articulations disappeared, swallowing was painless, and recovery was complete, except that the left elbow resisted treatment. This joint was then covered with a twelve-per-cent ointment of silver nitrate, and ichthyol given internally, in the dose of 25 centigrammes (4 grains) thrice daily in capsules. Vapor-baths were also given. The pain almost entirely vanished. The patient then visited a bathing resort for some time, where she was treated by massage and movements of the affected joint. Eight months after the disease began she was seen by the writer and was entirely cured. Rheumatic inflammation of the crico-arytenoid articulations is exceedingly rare. Hitherto there have only been reported 3 cases of Compaired, of Madrid; 3 cases of Simanowski, of St. Petersburg; and 2 cases of Meyer.—*Revue hebdomadaire de Laryngologie, etc.*—*The Medical Bulletin*, January, 1897.

S. S. B.

**Intra-Arytenoid Pachydermia.**

Dr. J. W. Barrett, Melbourne (*Intercolonial Med. Jour. of Australia*, Jan., 1897) reports a case of this affection observed in a female,

twenty-two years old; the symptoms complained of were increasing hoarseness, with temporary aphonia, and a tired feeling of the voice after talking for any length of time. No pain or difficulty in swallowing. Parents were healthy, and patient gave no history of other illness.

On examination a pink-white, fibrous-looking band was seen stretching between and below the arytenoids. It was 3 mm. in breadth, and distinctly elevated and rounded. The remainder of the larynx was normal. Iodide of potassium and mercury had no effect upon it. A cutting attempt was made at its removal, but without success. The tissue underwent no material change, as was seen at a later examination a number of months afterwards.

M. D. L.

#### **Intubation.**

In a case where attempts at extraction caused a small tube to sink farther down into the larynx, Trumpp (*Munch. med. Woch.*, April 28th, 1896) made pressure with the thumb on the trachea just below the cricoid cartilage, where the end of the tube could be felt, causing cough which forced the tube out. This method of expulsion never failed in subsequent cases in which he tried it. The pressure may be made with both thumbs inward and directly upward. If a more powerful pressure is exerted, the tube may be forced entirely out of the mouth.

W. S.

#### **Spasm of the Glottis in the Course of Broncho-Pneumonia.**

Two forms of laryngeal spasm (severe false croup) are described by Variot in *Pediatrics*, Feb., 1897.

The first in which the mediastinal lymph nodes were of sufficient size to cause pressure upon the recurrent laryngeal nerve, and the second in which spasm was reflex due to some change in the lung structure. In the case reported, a boy, one year old, broncho-pneumonia attacked both lungs. Dyspnoea became so serious that intubation was found necessary. No disease of the throat appeared. Death occurred on the sixth day.

At the autopsy, no deviation from the normal was found in the larynx, except two small ulcers over the cricoid cartilage, due to pressure of the tube. Considerable disease of the lungs was present, but the lymph nodes were not large. The child was rachitic.

The writer believes that temporary intubation is best, as it does not produce ulcerative changes.

M. D. L.

**Fallacies in Regard to the Singing Voice.**

Under this title Dr. Floyd Muckey, of New York, in the *Pacific Medical Journal*, March, 1897, attacks the views of Drs. Curtis and Frank Donaldson, as set forth by the latter. (See LARYNGOSCOPE Jan., 1897, p. 64).

Dr. Muckey discusses the laws which govern the vibration of strings, reeds and flutes, and shows that, as held by physicists of authority, the voice is a string instrument, the action of a string and reed while vibrating being essentially different, because the reed is free at one end, while the string is attached at both ends. The vocal cord is also attached at both ends, and in this respect resembles the string. As a conclusive proof that the vocal cords vibrate as strings, the resonator of Holleck demonstrates that they vibrate, like strings, in segments, which produce the overtones of stringed instruments, and, moreover, to get this series of overtones *the segments must always be equal*; but, according to the diagrams given in Dr. Donaldson's article, the vocal cords divide into unequal segments, which would render it impossible to get the series of overtones which really belong to the voice and constitute its "timbre" or "klang."

While agreeing that many throat troubles are caused by a faulty mechanism, Dr. Muckey maintains that his experiments made in connection with Prof. Halloes, of Columbia University, demonstrate that this faulty mechanism consists of the strong contraction of the extrinsic, especially the soft palate, tongue and contracted muscles of the pharynx. Any exercise that will keep the extrinsic muscles in position of rest while a tone is being produced, will be beneficial; hence, Dr. Donaldson's instruction to elevate the upper part of the chest and keep it fixed in that position, is erroneous.

Dr. Muckey severely criticizes Dr. Curtis' work on "Voice Building and Tone Placing," and, while admitting that it contains some very good suggestions, believes that the profession should not allow it to pass muster as a scientific work on the voice simply because it is written by one supposed to be *au fait* on the subject. F. B. E.

**A Case of Paralysis of the Left Recurrent Laryngeal Nerve, Due to Aortic Aneurism.**

Dr. A. B. McKee (*Occidental Medical Times*, Jan., 1897) reports the case of a German, æt. 40 years, who complained of hoarseness, the voice being reduced to a coarse whisper, coughing and sneezing aphonic, excluding hysteria. Patient claimed to be in perfect health save a slight soreness in the thorax.

The larynx was found with left cord fixed in the cadaveric position, its free border irregular and undermined. Position remains unchanged during phonation, although the arytenoid cartilage makes short tugging movements. The right cord moves rather freely.

Examination of the thorax shows visible pulsation at several points, especially in the supra and infra-clavicular regions, and in the left axillary line. The apex beat is three inches to the left of the mammary line, and a distinct bruit is heard transmitted to all parts of the thorax.

F. B. E.

#### **Removal of Foreign Bodies from the Œsophagus.**

The improvement in the application of the X-rays has extended to such a point that the location of coins, etc., in the œsophagus has become an easy matter (*Bulletin de l'Acad. de Med.*, Dec. 8, 1896). Foreign bodies as large as 15 millimeters are easily swallowed by children. They are usually arrested at the narrowest portion of the œsophagus, and, if they stand upright, it is difficult to recognize their presence by the usual methods. If the children continue to drink and swallow, and do not complain of pain in these cases, radiography is of great advantage, as it shows the exact location of the object. An incision down to the œsophagus will then allow the object to be forced upwards and extracted through the mouth, thus avoiding an incision into the organ, and not interfering with alimentation afterwards.

W. S.

#### **The Relation of the Pituitary Body to the Pharyngeal Tonsil.**

In a most interesting editorial upon acromegaly and gigantism, Dr. Wood Hutchinson (*Medical News*, Jan. 16th, 1897) calls attention to the observations of Virchow and others, to the fact that muscular strength is markedly increased in acromegalic subjects. This change, however, is followed by a rapid decline.

He mentions two cases of giant strong men and wrestlers, both of whom broke down and rapidly developed into well-marked cases of acromegaly, with characteristic symptoms. In examining the craniums of dwarfs and giants, the pituitary fossa of the former is as emphatically diminished in size, in proportion to the cranial circumference, as it is increased in the giant.

From this observation the supposition is deduced, "that they are actually the opposite extremes of the same process." Another probable clinical connection has been suggested, and that is: "whether the extraordinary disturbances of growth and general nutrition in children, associated with adenoids in the vault of the pharynx, may not in some

way depend upon the fact that this "pharyngeal tonsil" is embryonically, simply the lower portion or stalk, of the pituitary body, from which it has become separated by the ossification of the base of the skull." In early life it has been found that a fibrous cord runs up through the body of the sphenoid, connecting the two glands. It is supposed that structures which were primarily in sympathy with one another, always maintain some reflex influence in a similar manner." Observers claim that simple obstruction to respiration or other mechanical effects of these growths do not satisfactorily account for the great "disturbances of nutrition, both bodily and mental, associated with them and relieved by their removal." Harrison Allen, Osler and Dana believe in this "pituitary reflex." M. D. L.

#### **Pulsating Vessels in the Pharynx.**

According to P. McBride (*Edinburgh Med. Journal*, Dec. 1896), abnormal pulsation in the pharynx is not common. He has observed but three instances in his practice. In one of his cases, a lady 67 years old, the presence of a nasal polypus caused the patient to consult him. On examining the pharynx, he found that the right and left posterior pillars of the fauces pulsated. By digital examination he was able to trace a large arterial trunk across the posterior wall of the pharynx. There was a systolic but no diastolic bruit.

The second case was that of a man who showed a fluctuating and pulsating tumor in the region of the tonsil, which was eventually operated upon and proved to be a cyst. In the third case, the pulsation was an anatomical abnormality and appeared in a female, 61 years old. She complained of a hissing tinnitus. In this case there were epigastric and episternal pulsations. A systolic aortic murmur, with accentuated second sound, was also heard. Carotids, subclavians, axillary and brachial arteries showed marked pulsation. In the right forearm the radial artery was seen pulsating half way down the forearm. This peculiar symptom extended along the course of the vessel. Pulsation was also present on abdomen and legs. There was a tendency to diffused but patchy dilatation of the capillaries. There was some albuminuria, which diminished to a trace on milk diet; pulsation in the throat was seen at the junction of the posterior pharynx, with the lateral walls on each side. On the right side the pulsation was communicated to the tonsil. The author believes that the vertebral artery may appear upon the posterior wall of the pharynx, as the vessels he observed were of larger size than the usual ascending pharyngeal. The cases of Barber, Farlow and Knight are mentioned.

M. D. L.

## OTOLOGICAL.

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### **Meniere's Disease.**

Before the Austrian Otological Society, Dr. Kaufman reports a case of real Ménière's disease which, as remarked by Professor Politzer, was very similar to the first case observed by Ménière. The patient, a woman aged 31, under the care of Dr. Gruber, had always been healthy. One evening she hurried into the theatre, and while warm drank some water. On her way home she observed a noise in her ear; she woke suddenly in the middle of the night with violent dizziness, vomiting, intense noise, and complete deafness in the left ear. Vomiting was repeated during the next three days at least six or eight times a day, and the vertigo was so severe that for twelve days the patient was unable to leave her bed.

The appearance of both tympanic membranes was normal, also the Eustachian tubes. In the left ear there was complete deafness, only deep-toned tuning forks being heard at all by air induction. The vertigo was intermittent, especially in the dark, and was very distinct when she moved with her eyes shut. All treatment had been without result, although pilocarpine had just been tried.

Dr. Gruber stated that cases of pronounced Ménière's disease observed by him were usually bilateral, especially those which came on suddenly with vertigo and deafness. He acknowledged, however, that the case reported was a genuine one. He had never seen any improvement take place in cases in which there was an effusion of blood into the labyrinth. Professor Politzer attached considerable importance in diagnosis to the reaction for deep-toned tuning forks in conjunction with the other symptoms.—*Medicine.* S. S. B.

### **A Case of Central Otitis of the Mastoid Simulating Neuralgia of the Trigemini.**

This unusual affection occurred in a robust man, seventy-three years old, after an acute inflammation of the middle ear (Dr. R. Spira, Cracow, *Archives of Otolaryngology* Vol. XXV. No. 4). The drum was incised, and the symptoms gradually subsided. At the same time severe pain in the neck, larynx and the entire corresponding side of the head set in. A diagnosis of trigeminal neuralgia was made. Iodide of sodium was given internally and galvanism. In a few days paresis of the abducens of the same side was noticed. No fever or cerebral symptoms. The ear and mastoid revealed nothing. At times, during several months, temporary symptoms of irritation in the mastoid region, with decrease of the

cephalgia, occurred. After eight months a sub-periosteal abscess of the mastoid was opened, and a fistula was found leading to caries and suppuration. The bone was scraped, and the usual antiseptic dressings applied. Recovery took place in six weeks, with complete disappearance of the neuralgic symptoms, and a rapid improvement of the abscess of the abducens.

M. D. L.

#### **Auditory Hallucinations.**

After describing the origin of auditory disturbances in deaf lunatics, J. Pietersen (*Birmingham Med. Review*, March, 1897) corroborates the statement of Segis, that every case of insanity in which auditory hallucinations can be proved should, without doubt, be regarded as one of the dangerous forms of mental derangement, whatever may be its degree of curability. He further remarks that, in such cases, a prognosis is absolutely impossible and unwarrantable.

M. D. L.

#### **Labyrinthine Disease Produced by Large Doses of Sodium Salicylate.**

During an attack of acute muscular rheumatism, a female, 40 years of age, took 140 grammes of salicylate of sodium (Dr. Ferd. Alt, *Archives of Otology*, Vol. XXV., No. 4). Tinnitus in both ears appeared, accompanied by dull headaches. While taking the medicine, attacks of vertigo seized her, during one of which she fell to the right and became unconscious. Tinnitus of the right side was constant. These attacks finally occurred daily. The tuning forks showed decided internal ear disease of the right ear.

M. D. L.

#### **Suppurations of the Ear and Their Treatment.**

Dr. Paul Rauge states that surgical interference should be made in the following classes of diseases of the ear (*Semaine Med.*, January 11th, 1896):

1. In all cases of chronic otorrhea which are not improved when a careful antiseptic treatment is employed.
2. When the probe shows the existence of osseous lesions, or denuded points, or sequestræ, either of the walls or of the ossicles.
3. When circumstances point to the existence of cholesteatoma.
4. When the hearing is totally lost, and when there is nothing therefore to risk in this direction, and when all the indications point to a persistent suppuration.
5. Finally, surgical interference is not only permissible, but even urgent, when there is the least sign of the possibility of an encephalic complication.

W. S.

### Respiratory Movement of the Membrana Tympani.

Dr. E. Donaldson, of Edinburgh, from the examination of a case in which there was respiratory movement of the membrana tympani, gives the following conclusions:

1. The whole membrana tympani, or a part of it, may move during respiration through the nose.
2. The movement may be present one day and absent the next.
3. It occurs when the Eustachian tube is unduly patulous, and when the membrane is in part or wholly atrophic and flaccid.—*Lancet*, October 10th, 1896.

W. S.

### Tuberculosis of the Middle-Ear.

Dr. M. W. Milligan states that there are three ways which may serve for the penetration of Koch's bacillus into the region of the middle-ear: (a) the Eustachian tube; (b) the lymphatic and blood vessels; (c) the external auditory canal when the tympanum is perforated (*Gaz. Méd. de Paris*, Jan. 4, 1896). In the majority of cases, tuberculosis of the middle-ear is secondary. The lesions may develop in the Eustachian tube or the tympanum. The clinical characteristics are somewhat uncertain by the sudden appearance of pus without the usual inflammatory signs of other forms of otitis. The drum remains pale and presents a peculiar edematous aspect. Enlargement of the periauricular ganglions are important signs; also abundant discharge, which rapidly becomes fetid, in which may be found fragments of tissue, indicating profound disorganization within the middle-ear.

If these signs are wanting, or are not marked, recourse should be had to bacteriological examinations, or to the inoculation of animals. An operation should be undertaken early, and consists in free ablation of all the tubercular products. In some cases, however, the application of chloride of zinc seems to give good results. (The bacteriological examination of cases of tubercular disease of the middle-ear is an important diagnostic measure, and should not be neglected regardless of the prominence of the clinical signs.—SCHEPPEGRELL.)

### The Serum Therapy in Ozena and in Certain Forms of Purulent Otitis.

Dr. Gradenigo states that the microbial theory of ozena is gaining ground. (*Ann. des Mal. de l'Oreille, du Larynx, etc.*, Aug., 1896). To the encapsulated diplobacillus of Lowenburg has been added the *bacillus mucosus* of Abel, and more recently the bacillus of Belfanti. The latter micro-organism presents characteristics in its culture and in its pathogenic effects similar to that of the pseudo-diphtheritic

bacillus. Belfanti and Pella-Vedova recommend the treatment of ozena by the anti-diphtheritic serum.

The results which they have obtained appear encouraging. The author divides ozena into three classes: the first dependent upon hereditary syphilis; the second upon tuberculosis; and the third appears to be independent of any diathesis. In regard to acute otitis media, in which the true diphtheritic bacillus is in the throat, the serum therapy is, of course, indicated. In certain cases of chronic otitis observed in connection with ozena, the effects of this inoculation also appear to be good.

W. S.

### **Contribution to the Study of Intracranial Affections Originating in the Ear.**

This was the subject of a communication by Professor Gruber to the Austrian Society of Otology. Desiring to elucidate certain points relative to the topical diagnosis of intracranial complications of aural origin, Professor Gruber had caused to be analyzed 40,073 cases of patients dying in the Vienna Hospital since January 1, 1873 (the year of the foundation of the Otological Clinic), to December 31, 1894. Of these 40,073 cases, 1806 (1242 men and 564 women) died of intracranial disease. Of this number, 232 cases were due to disease of the ear (163 men, 69 women)—12.8 per cent of the deaths caused by intracranial disease or 0.58 per cent. of the total number of deaths (40,073).

Of the deaths consecutive to disease of the ear, most occurred in persons between the ages of 10 and 50 years. Children less than 6 years of age are not received into the General Hospital of Vienna, but are sent to a Children's Hospital.

The right side was affected 118 times (50.87 per cent.), the left side 103 times (44.39 per cent.), both sides simultaneously 6 times (2.59 per cent.), and the side was not designated in 5 cases. Suppurative otitis media was complicated with caries in 167 cases (128 men, 39 women), caries was absent in 65 cases (44 men, 21 women). The sinus was affected (1) in purulent otitis media without caries, there being 42 cases of thrombosis of the sinus (in 24 thrombus was solid, in 18 it was purulent); (2) in purulent otitis media with caries, there being 106 cases of thrombus of the sinus (in 64 the thrombus was solid, in 42 it was purulent). The sinuses most frequently involved were the transverse and sigmoid—24 times in purulent otitis without caries, 73 times in purulent otitis with caries. Men were attacked 73 times, women 24 times.

As regards the nature of the intracranial disease, three classes of cases must be distinguished:

1. Simple otitis without thrombosis of sinus:  
Meningitis, 31 cases (21 men, 10 women).  
Cerebral abscess, 19 cases (14 men, 5 women).  
Cerebellar abscess, 1 case (woman).
2. Otitis with thrombosis:  
Meningitis, 12 cases (7 men, 5 women).  
Cerebellar abscess, 5 cases (2 men, 3 women).
3. Cases with caries without thrombosis:  
Meningitis, 43 cases (36 men, 7 women).  
Cerebral abscess, 13 cases (12 men, 1 woman).  
Cerebellar abscess, 12 cases (8 men, 4 women).
4. Cases with caries and thrombosis:  
Meningitis, 21 cases (17 men, 4 women).  
Meningitis with cholesteatoma, 8 cases (6 men, 2 women).  
Cerebral abscess, 7 cases (6 men, 1 woman).  
Cerebellar abscess, 4 cases (2 men, 2 women).

The second class (otitis with thrombosis) caused 16 deaths from pyæmia (11 men, 5 women); the fourth class (otitis with caries and thrombosis) occasioned 32 deaths from pyæmia (22 men, 10 women).

—*The Medical Bulletin.*

S. S. B.

#### **Acute Purulent Otitis Media Complicated by Petro-Pharyngeal Abscess.**

This infrequent complication presented itself in a male patient, 40 years of age, during the course of an acute suppurative inflammation of the middle-ear. (Dr. F. L. Stillman, Columbus, O., *N. Y. Med. Journ.*, Feb. 6, 1897). Severe hemicrania became a prominent symptom, and the patient complained of difficulty in rotating the head, locating the stiffness in the back of the neck. On account of some cerebral symptoms—sluggishness of mental activity, and drowsiness—a surgeon was consulted. No diagnosis was arrived at. The symptoms progressed, and, as a cerebral abscess was feared, another consultant was called in. No cerebral abscess could be discovered, but the symptoms were accounted for by the possible presence of a localized meningitis. Suitable medication was prescribed. Patient stated that opening of the jaw caused a feeling of pressure in the ear. Five days later, swelling of neck in front of sterno-mastoid muscle was noticed. Painful deglutition existed; attention being drawn to the throat, the left half of the soft palate was seen to be affected. Swelling of this region became more marked, and same was lanced, but no pus was evacuated. Hot applications were applied. A few days later inflation, by means of Politzer bag, was attempted, and a sudden gust of pus from the ear was observed. The patient remarked that

something broke in his head. The finger was introduced behind the palate, and pressure upon the swelling in this region caused pus to flow freely from the external auditory canal. An abscess in the left tonsil also opened spontaneously, and the patient made a good recovery. The author thinks that the pus traveled along the sheath of the tensor tympani muscle.

M. D. L.

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## BOOK REVIEWS.

**Diseases of the Ear, Nose and Throat and Their Accessory Cavities.** A Condensed Text-Book. By Seth Scott Bishop, M.D., LL.D. Illustrated with 100 Colored Lithographs and 168 Additional Illustrations. One Volume, Royal Octavo, pages xvi-496. [Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street. Extra Cloth, \$4.00, net; Sheep or Half Russia, \$5.90, net.

The demand, by general practitioners and medical students, for a book on diseases of the ear, nose and throat, concise and not too classical, have been fully met in the present volume. The author does not claim for it recognition as a classic, but presents a concise, practical and up-to-date work, which should be most acceptable to the many general practitioners who are called upon to treat diseases of the ear, nose and throat; the specialist, as well, may glean many valuable points of information after a careful perusal.

Subjects which have gained recent prominence are treated in greater detail. The present status of diphtheria and the antitoxin therapy, the management of mastoid diseases, the treatment of hay fever, the technique of intubation, are given special consideration.

Many of the latest improvements in apparatuses and new instruments are described and illustrated. The volume contains many excellent original illustrations. The typography is good, and the arrangement and index practical and convenient. The author has produced a comprehensive work, which contains all the essentials to an understanding of these specialties.

**Diseases of the Upper Respiratory Tract.** The Nose, Pharynx and Larynx. By P. Watson Williams, M.D., London. Illustrated. 8vo., pp. 282. [Bristol, England: John Wright & Co. New York: E. B. Treat, 1895. Price, \$2.25.

The author intends his book to be an introduction to the study of diseases of the upper respiratory tract. It is not expected that it will take the place of the more ponderous tomes, as it does not enter into sufficient detail. While the author does not lay claim to much origin-

ality in his work, yet it is plain to the reviewer that he is over-modest in this respect. The frontispiece, a vertical mesial section, is one of the best we have ever seen. Five excellent colored plates and one hundred and twenty other illustrations greatly assist in elucidating the text. The various subjects are concisely treated. The work will amply repay the special practitioner for its purchase; but will be especially valuable to the general practitioner and student.

**Atlas of Diseases of the Mouth, Nose, and Naso-Pharynx.** By Dr. L. Grünwald, Munich. Small 8vo., with 31 Excellent Plates and 96 Chromo-Lithographic Illustrations. J. F. Lehmann & Co., Munich. 1897. Price, in cloth and gold, \$1.50. American agents, Lemcke and Buechner, 812 Broadway, New York.

This is a companion volume to the very excellent *Atlas of Diseases of the Larynx* by the same author and publishers.

Sixty-nine well-executed chromo-lithographic plates illustrate the pathology of this series of diseases in an admirable manner, and a brief explanation accompanies each cut; while written in German, the atlas should be perfectly acceptable to English readers, as there is but little text in the volume, the efforts of the author being rather a presentation of the pathological pictures encountered. It is an excellent small atlas at a very moderate price.

**Bureau of the Medical Press.** We are pleased to announce that the Bureau inaugurated by Mr. Charles Wood Fassett at the last meeting of the Mississippi Valley Medical Association, proved such an unqualified success, that it will be continued at the golden anniversary of the American Medical Association in Philadelphia, June 1 to 4. A catalogue will be issued containing a descriptive index to the medical periodicals and reference books contained in the Bureau, and advertising matter of various kinds will be distributed for members.

The LARYNGOSCOPE will be found on file at this Bureau, and our friends in attendance at this meeting are cordially invited to make the Bureau their headquarters. They will find plenty of good reading matter, medical dictionaries, and the latest reference books, as well as writing materials and a stenographer for use of visitors.—Ed.

The Cleveland *Medical Gazette* is one of the brightest journals that comes to our office. It well represents the Ohio metropolis, which is fast coming to the front as a great medical center. The *Gazette* is ably edited, well managed, and is liberally clothed by its publishers, and to these facts may be attributed its success.

**A Country Doctor.** By T. H. Shastid, M.D. Reprint *Jour. Am. Med. Assoc.*, 1887.

**The Retrospect of Practical Medicine and Surgery.** A Half-yearly Journal. Edited by James Braithwaite, M.D., London. Volume CXIV. January, 1897, pp. 435, [New York: G. P. Putnam's Sons, 1897. Price, \$1.50.

This is a continuation, in book form, of the well-known Braithwaite's Retrospect. It is a practical digest of many of the more worthy articles that have appeared in the various medical journals. We note the entire absence of a digest of the many excellent articles that have appeared on diseases of the nose.

**The International Medical Annual and Practitioner's Index.** A Work of Reference for Medical Practitioners. 1897. Fifteenth Year. [New York: E. B. Treat & Co. Pp. 724. Price, \$2.75.

The fifteenth issue of this well-known annual contains an admirable digest of medical progress in 1896. We notice among the prominent contributors to the volume representing the departments of ear, nose, and throat diseases, the names of Drs. J. Dundas Grant, P. Watson Williams, W. A. Lane, and Henry Suvill, Walter J. England, F. de Havilland Hall.

Under the section "New Treatment" appears an excellent resumé of Empyema of the Antrum, with descriptive cuts of the most approved method of treatment.

In the treatment of chronic sup. ot. med., tinct. iodi, balsam peru or tulo, silico-fluoride potassium, and trichloroacetic acid receive attention. Liquid vaseline injected through the Eustachian tube, massage of the tympanum, and the application of the Eustachian bougie are recommended in the treatment of non-sup. ot. med. chr.

For the treatment of acute otitis med., carbolyzed glycerin (10 to 20 per cent.) instilled warm into the ear is highly recommended. Early paracentesis is advised in all cases, excepting where there is advanced tuberculosis or marked diabetes. Following spontaneous or artificial evacuation of the secretion, a veto is placed against inflation of the middle ear, but attention is carefully directed to treatment of nose and throat.

Under the chapter on "Insanity" appears an excellent series of plates, illustrative of deformities of the ear in the consideration of degeneracy and mental affections.

An excellent chromo-lithographic plate, illustrating the clinical pictures found in tuberculosis, syphilis, and cancer of the larynx, accompanies a short article on laryngeal growths and their treatment.

The volume contains many other valuable suggestions of interest to the otologist and laryngologist.

**Practical Pathology.** A Manual of Laboratory and Post-Mortem Technic, designed especially for the use of Students in Pathology and Physicians. By A. S. Warthin, Ph.D., M.D. 8vo., 130 pages, cloth. George Wahr Publisher, Ann Arbor, Mich. Price, \$1.50.

This volume is distinctly a practical guide to the pathological laboratory and post-mortem room, and as such admirably meets all requirements.

Each section of the subject is dealt with in a clear and brief manner. Space is allotted to post-mortem examination of ear, larynx, nose, and accessory cavities.

It contains more practical information in less space than any volume of its kind we have yet seen.

**The Diseases of the Nose, its Accessory Cavities, and of the Naso-Pharynx.** (*Die Erkrankungen der Nase, deren Nebenhöhlen und des Nasenrachenraums.*)—By Dr. Carl Rosenthal, of Berlin. Second edition. [Berlin, 1897: A. Hirschwald. Price, \$2.

The first edition of this compendium appeared a few years ago. No better proof of its utility could be furnished than the fact, that a second edition became necessary so soon. This is not often the case with text-books referring to a specialty in which there is no lack of text-books of every kind, from the large two-volume handbook down to the pocket quiz compend of limited pretensions. Rosenthal has intended his book more for the general practitioner who is in search of reliable information in rhinology, than for the specialist, although the latter, especially in his early apprenticeship, will find this book to be a reliable guide to the study of diseases of the nose and naso-pharynx; and even the experienced specialist may with profit consult this little work for reference or repetition regarding some points about which he desires some quick and trustworthy information. This is probably the cause of the popularity of this book, that all the most important and well-authenticated facts of modern rhinology are clearly described, without going too much into specialistic detail, and omitting all such theories, modes of treatment and operations, which have either but historic interest, or which are open yet to doubt. It is for this reason a book that will most strongly appeal to physicians who, without being specialists, are in the habit of treating the more common diseases of this region, and who in doing so wish to keep abreast of the times.

The book is divided into three parts, the first part treating of the diseases of the nose proper, the second of those of the accessory cavities, and the third of the diseases of the naso-pharynx. The author describes all the different affections in a clear and direct style,

avoiding to dwell upon rare and unimportant conditions, and giving good and sufficient descriptions of symptoms, differential diagnosis, and treatment. Two very valuable chapters, not always found in books of this kind, are those on skin-diseases of the nose, and on affections of the nose during the course of acute infectious diseases. There are many excellent points in other chapters, *e. g.*, that on acute coryza in the new-born. R. is of the opinion that a gonorrhœic infection of the nasal mucous membrane is not so rarely communicated to the child, as many authors seem to believe. In the treatment of hypertrophic rhinitis he is right in warning against unnecessary and too extensive operations and cauterizations. The galvano-caustic batteries which he mentions, are, in this country at least, probably everywhere superseded by the use of storage batteries, or, whenever feasible, by current controllers (for either the alternating or continuous current). He recommends also the use of astringents in hypertrophic rhinitis; and the posterior tamponade of the nose in cases of epistaxis, which cannot be checked by the anterior tamponade within twenty-four hours. These two points will probably not be accepted by many American rhinologists. But with a few exceptions the book is full of good, sound, and reliable advice, and can be safely trusted as a guide. The second edition is fully up-to-date, and will, no doubt, find many friends.

M. T.

**Anomalies and Curiosities of Medicine.** Being an Encyclopedic Collection of Rare and Extraordinary Cases, and of the most Striking Instances of Abnormality in All Branches of Medicine and Surgery, derived from an Exhaustive Research of Medical Literature from its Origin to the Present Day, Abstracted, Classified, Annotated, and Indexed. By George M. Gould, A.M., M.D., and Walter L. Pyle, A.M., M.D. Imperial Octavo, 968 pages, with 295 Illustrations in the Text, and 12 Half-tone and Colored Plates. [Philadelphia: W. B. Saunders, 925 Walnut Street; 1897. Prices: Cloth, \$6.00 net; Half Morocco, \$7.00 net. *Sold only by subscription.*

The publication of this valuable volume creates a new department of medical literature, as it is the first attempt at so extensive a collection of anomalies and abnormalities yet undertaken. The work covers so extensive a field, that it cannot fail to interest every class of medical readers. Every branch of medicine and surgery has contributed its quota to the interesting pages, and every source of information seems to have been utilized in acquiring an exhaustive research.

The excellent typography of the volume, the illustrations, half-tones and colored plates are special features, and reflect highest credit on the publisher.

The readers of THE LARYNGOSCOPE will find of especial value the many interesting chapters on malformations, peculiarities, accidents and anomalies of the ear, nose, lip, palate, uvula, tongue, trachea and esophagus, in their many and varied forms, with numerous striking illustrations to emphasize and elucidate the text.

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### BOOKS AND PAMPHLETS RECEIVED.

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Laryngeal and Post-Nasal Photography with the Aid of the Arc Light. By Thomas R. French, M.D., Brooklyn. Reprint *N. Y. Med. Jour.*, Jan. 23, 1897.

Nasal Sarcoma Cured by Operation. By G. Melville Black, M.D., Denver, Colo. Reprint *N. Y. Med. Jour.*, Aug. 15, 1896.

Nasal Obstruction. By Clement F. Theisen, M.D. Reprint, *Albany Med. Annals*, Vol. 18, No. 5.

A Remarkable Case of Fibro-Chandroma of Bronchial Origin. By A. W. de Roaldes, M.D. Reprint, *N. Y. Med. Journal*, Feb., 1897.

Report of a Case of Incomplete Fracture of the Left Cornu of the Thyreoid Cartilage, Resulting from Self-Inflicted Violence. By A. W. de Roaldes, M.D. Reprint, *N. Y. Med. Journal*, Feb., 1897.

Unusual Mobility of the Tongue. By M. D. Lederman, M.D. Reprint, *N. Y. Polyclinic*, March 15, 1897.

The Abdominal Type of Respiration as often Employed in Singing. By O. J. Stein, M.D. Reprint, *Journ. Am. Med. Ass'n.*, March, 1897.

A Case of Unusual Laryngeal Growth. By J. W. Gleitzmann, M.D. Reprint, *N. Y. Med. Jour.*, Oct., 1896.

Diseases of the Accessory Sinuses of the Nose, with Demonstration of Specimens, Drawings and Instruments. By J. W. Gleitzman, M.D. Reprint, *Annals Ophth. and Otology*, Vol. V., No. 2.

Traumatic Perforation of the Membrana Tympani. By Lewis S. Somers. Reprint, *Phila. Polyclinic*, Vol. 6, No. 10.

Eucaine Hydrochlorate as a Local Anesthetic in Hypertrophic Rhinitis. By Lewis S. Somers. Reprint, *Therapeutic Gazette*, January, 1897.

The Proposed City Hospital for Consumptives. By W. Freudenthal, M.D. Reprint, *N. Y. Med. Jour.* Feb., 1897.

Ein Nasenbeutel. By Dr. W. Freudenthal, M.D. Reprint, *Archiv. f. Laryngologie*, Vol. 4, No. 2.

Third Report of the Home for the Training in Speech of Deaf Children. Philadelphia, 1896.





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See Report by Dr. J. HOMER COULTER, in *The Journal of the American Medical Assn.*, Nov. 7, 1896:

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